Amadeus5 User Guide

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1 APPLICATION OVERVIEW

Amadeus5 is a sophisticated yet user-friendly security platform which transforms your facility into a smart building. It is built around specialized modules, with each covering a specific branch of the security such as access control, alarm management, video monitoring, parking management, guard tours, lift control, time & attendance etc. All these modules provide centralized security control for all types of installations irrespective of their complexity.

The modular and scalable system capacity can handle effectively unlimited numbers of all entities in each branch of the security - cardholders, controllers, readers, supervised alarms, outputs, video servers, operators, access groups, security levels, etc. The system can be used by a single company, shared by several tenants located in the same building or a multi-building complex, and offers solutions suitable even for international companies with offices spread over the world.

The user-friendly software is easy to configure and use, with predefined parameters for fast installation, automatic actions and reflexes as well as a personalized report wizard. Full information on real time alarms and events is provided in an active alarm window and live interactive graphical maps, in the event log, and on diagnostic screens.

The user screen provides all necessary information to react immediately, with full knowledge of the facts. Security is reinforced as alarm conditions and events automatically trigger predefined reactions: flashing icons on relevant displayed maps, message displays and playback of verbal instructions, alarms, CCTV or any programmed relay activation, setting alarms on/off by zone, card invalidation, etc.

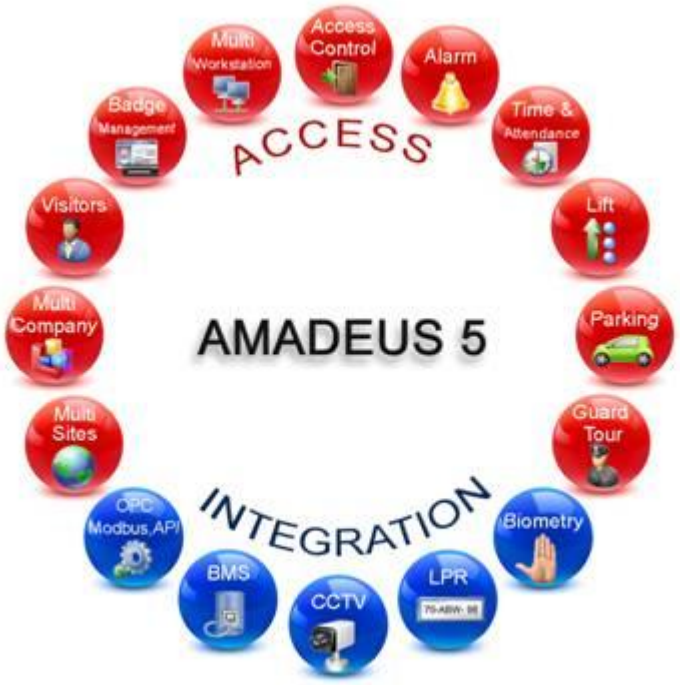
Sets of Actions ('Processes') can be defined and invoked by the system or manually.

The system triggers processes by pre-defined events (access granted or denied, input under alarm, scheduler, user confirmation, etc.)

A User can trigger Processes manually by opening the 'Manual action' screen and clicking on an icon representing the Process. These Icons can also be placed on the system toolbar for easy access.

Processes can:

- Activate Relays, arm/disarm Alarm Zones (groups of Inputs), activate displays, play sounds or send messages, validate/inhibit cardholders, display/record video, print reports, etc., Automatically switch off the lights and heating in a designated area when a particular badge is read, thus allowing for energy savings.
- Automatically arm or disarm Alarm Zones when they are unpopulated or accessed.



The Amadeus5 application ('the Application') consists of a powerful core of standard capabilities and a versatile range of optional modules for users with particular requirements. These include specific integrations allowing users to combine the Application's comprehensive Access Control system with specialist functionality incorporating the latest technologies available in the market.

BASIC FUNCTIONS

Access Control
Alarm Control
Basic T&A (T)
Report Wizard

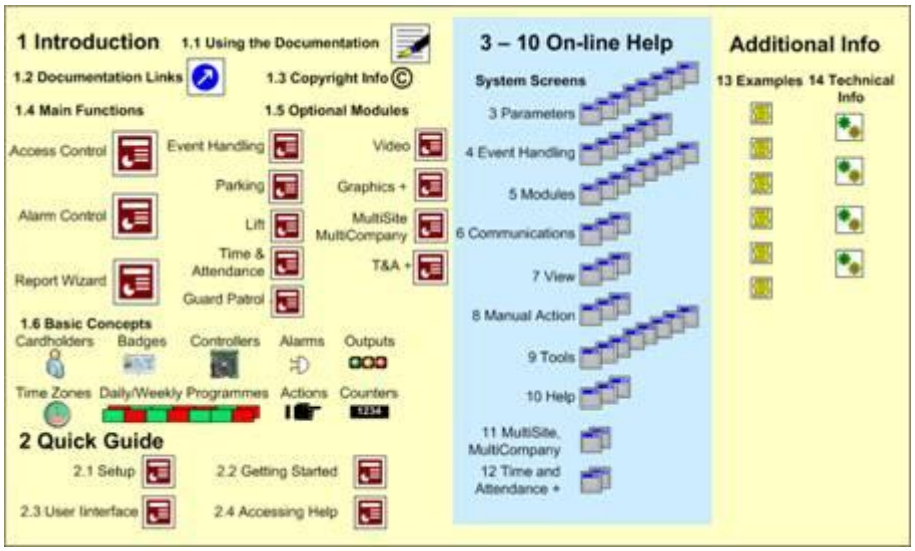
OPTIONAL MODULES

Alarm Monitoring / Graphic Display	Workstations	Guard Tours
Parking	Lift	Video
Badge Printing	License Plate Recognition	Advanced Graphics (G+)
Multi Company	Multi Site /Multi Polling	Advanced T&A (T+)
SQL	OPC and Modbus TCP	

1.1 USING THE SYSTEM DOCUMENTATION

The system documentation is supplied with the application as a Microsoft HTML Help file, designed to function as both the **User Guide** and as **Online Help**. It is designed to be used **on line** – all topics are linked, so that the reader can start with the high-level description of a feature, jump directly to see details of the screen or screens used for that function, and from there, go to examples, specifications and technical details.

While the application is running, it is linked directly to the On-line Help sections, so from any screen, the user simply presses F1, and the topics describing use of the current screen are shown.



The documentation file is also available as an Acrobat® .pdf file. This is fully cross-referenced and linked, and is designed to be accessed online, but it can be printed if required.

1.2 DOCUMENTATION LINKS

Note: If you got to this screen after pressing F1 for Help, you can navigate to the specific HELP topic by clicking on the relevant entry in the table below.

1. OVERVIEW – Describing the System		
Application Overview *Basic Functions* *Access Control* *Alarm Control* *Report Wizard*	**Optional Modules** *Event Handling* *Graphics* *Alarm Management* *Workstations*	**Optional Modules**/contd *Guard Tours* *Parking* *Lift*
Optional Modules/contd *Video/CCTV* *Badge Printing* *License Plate Recognition*	**Optional Modules**/contd *MultiCompany/MultiTenant* *Multi-site* *Advanced T & A*	**Optional Modules**/contd *SQL* *OPC/Modbus*
2. QUICK GUIDE		
Setting up the Application	*Getting Started*	*User Interface*
3 - 10. SYSTEM MENUS – All the System screens		
3 – PARAMETER TAB *Computer* *Networks* *COM* *TCP/IP* *Modem* *Controller* *Readers* *Door Control* *Access Mode* *Misc./Badge Format* *Fingerprint* *Inputs* *Outputs* *Local Reflexes*	**3 – PARAMETER TAB/contd.** *Daily Programmes* *Weekly Programmes* *Holidays* *Access Groups* *Cardholders* *General* *Personal* *Location* *Customized* *Exceptions* *Schedule Access Groups* *Attached Documents*	**4 – EVENT HANDLING TAB** Graphics *Icon* *Map* *Position* *Active Alarms* Alarm Monitoring *Input Group* *Output Group* *Event Handling Prog.* *Action* *Process* *Global Reflex* *Counter*
5 – MODULES TAB *Parking Module Introduction* *Parking Lot* *Parking Users Group* *Parking Zone* Lift Module Introduction *Lift Programme* *Lift Authorization Groups* *Time and Attendance Modules* *T&A Standard Module* *T&A T+ Module* *Video* *DVR* *Camera*	**5 – MODULES TAB/contd.** *Badge Printing Module* Graphics + Module Introduction *Symbol Builder* *Position (G+)* *Active Alarms (G+)* *GuardPatrol Module Intro.* *Guard* *Checkpoint* *Guard Tour Programme* *OPC Server Module* *Modbus Module*	**6 – COMMUNICATIONS TAB** *Diagnostics* *View Log* *Clear Log* **7 – VIEW TAB** *Display Photos* *Location*
8 – MANUAL ACTION TAB *Crisis Level* *Relays Control* *Execute Processes*	**9 – TOOLS TAB** *Report Wizard* *Database & Journal Tools* *Cardholder Tools* *Multiple Access Group Wizard* *File Save* *Options*	**10 – HELP TAB** *Content* *Search* *On the Web* *About*
11, 12. MAJOR OPTIONAL MODULES		
11- *Multi-site, MultiCompany*	**12 -** *Time & Attendance +*	
13 – 16. ADDITIONAL INFORMATION		
13 – *Scenarios & Examples*	**14 –** *Technical Info.*	15 – *System .ini File*

1.3 COPYRIGHT AND TRADEMARKS

- Microsoft, Windows .NET and Visio are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- Intel, Pentium and Xeon are trademarks of Intel Corporation in the U.S. and/or other countries.
- Spread Toolkit is either a registered trademark or trademark of Spread Concepts LLC in the United States and/or other countries.
- NetHASP is either a registered trademark or trademark of Aladdin Knowledge Systems Ltd. in the United States and/or other countries.

1.4 APPLICATION BASIC FUNCTIONS

In this section:

- *Access Control*
- *Alarm Control*
- *Basic Time and Attendance*
- *Report Wizard*

1.4.1 ACCESS CONTROL

The system supervises the access to all or part of your facility (offices, production areas, lab, computer room, or storage areas) by authorized persons, during user-defined time periods. Smart multi-technology controllers, linked to advanced readers, are programmed to control "who is going where and when".

Each **Controller** has its own large memory capacity so that the entire database relevant to the access points connected to that controller is recorded locally. Controllers store the list of cardholders authorized at its **Readers** and their time parameters, and also the time parameters applicable to readers, how the doors are to be controlled, and all the access rules to be enforced, including special rules for holidays, whether an escort is required, whether Anti-Passback is to be applied, and so on.

Cardholders - All authorized personnel (staff, contractors and visitors) have personalized **Badges** that control their access. These can include card or other ID methods (including advanced ID systems such as biometrics).
When cardholders attempt to access a particular area by using their badge or other ID at a reader, the information is relayed to the reader's controller. Access checking is performed instantly (no need for PC intervention), and access is granted or refused by applying the parameters relevant to the cardholder and the reader at that time. The resulting transactions are sent to the PC where they are displayed, stored in the **System Log** and are available for later reporting.

Additional routine information about cardholders, such as photo, address, phone number, car registration and so on, can be stored, and custom information may be added. All information is available for the operator as queries, and may be included in reports.

Badges - A comprehensive range of industry-standard identification methods are supported, including Wiegand, magnetic and barcode cards, as well as biometric identification. Provision is made for a wide variety of formats and variations, and more than one type/format can be

supported within a single installation – this can be vital where organizations merge, or where different organizations share facilities within one set of premises.

The system allows an inventory of unallocated badges to be maintained so that new cardholders can be issued with identification without delay.

1.4.2 ALARM CONTROL

Alarm Management - Your organization can prevent catastrophes or limit damage by being informed of abnormal events and reacting to them in real time. The system supervises **Alarm Inputs** from sensors at predefined alarm points. Examples of sensors may be magnetic contacts, motion detectors, door and window sensors and temperature indicators. These are connected to **Inputs** on intelligent **Controllers,** and their status can be monitored and reported centrally. The system can be set to react to alarm inputs by opening or closing **Relays** (or '**Outputs'**) that control doors, activate audible alarms, light alarm panels, or operate air-conditioning and other equipment. Local Reflexes allow the status of an Input to be used directly as the trigger for an Output. Thus, a 'door open' sensor can trigger a local warning light or audible alarm.

Site Scheduling – The system allows definition of Time Zones which define when particular sets of rules must be applied. Time zones are grouped into **Daily** and **Weekly Programmes** that define when the rules must be applied for readers, alarms and cardholders.

1.4.3 BASIC TIME AND ATTENDANCE

The system provides accurate recording of either start- and end-times or a full list of all clockings. This reduces queries and allows more efficient calculation of pay slips.

1.4.4 REPORT WIZARD

A sophisticated Report Wizard provides predefined reports on all elements of the system, and allows the user to add or remove categories of information and filter the data to produce more specific, customized reports where required. Reports cover all types of system transactions, and can also list hardware information and configuration parameters.

A preview facility allows the user to see what a particular set of parameters will produce before actually printing the report. The user can then return to the parameter screens and make further modifications until the required report is built.

New user report definitions may be stored so that the tailored reports are 'named' and can be called later and re-used without requiring re-definition.

1.5 OPTIONAL MODULES

The optional modules of the system require licensing. The user can see the modules for which the installation is licensed by checking the list of modules displayed in the Application's *Help/About* screen.

🡸 *Expand the* **Contents** *entry to see more detail*

1.5.1 EVENT HANDLING – GRAPHICS AND ALARM MONITORING

The Event Handling Module provides the display, in real time, of all the events that occur in the system. This module consists of two parts:

- **Graphics** or **Graphics+ Module**
- **Alarm Management Module**.

These are usually used together.

1.5.1.1 GRAPHICS

BASIC GRAPHICS MODULE

The Graphics Module provides a tailored user interface showing current alarms and the status of all Inputs and Outputs in a rich graphic interface including maps, icons and text. The **Active Alarms** screen consists of an **Alarms window** showing all new alarm events, and a user-option displaying either user-defined **Maps** of the site showing the status of Inputs and Outputs as **Icons**, or lists showing all Inputs and Outputs.

A monitoring toolbar gives the user one-click access to all the functions needed for management of the alarms and processes. This provides a convenient single interface for monitoring and handling all system events.

Map files can be imported to represent all or part of the installation. The system provides predefined icons that the user can assign to represent inputs, outputs, processes and reflexes. The predefined icons (or additional user-defined icons) can be positioned on the site maps.

The resulting dynamic display give the user a clear, up-to-date representation of the site either in text or graphic form, showing the status of all the components and providing convenient one-click access to all required functions.

ADVANCED GRAPHICS (G+) MODULE

The G+ Graphics module displays components dynamically so that, for example, a door symbol shows if the door is physically open or closed, the state of the relays controlling it ('always open' or 'always closed'), if it is in a 'forced' status, and whether alarms associated with it have been acknowledged and/or confirmed.

By double-clicking on symbols, users change views, display camera streams, or trigger actions or processes. Maps displays can be zoomed to show general or detailed views, and specific symbols can be defined to be 'always visible', or to be hidden at some zoom levels.

The module provides an extensible library of predefined icons. The user has powerful editing capability to create new icons and add them to the library.

1.5.1.2 ALARM MANAGEMENT

The Alarm Management Module gives the operator tools to automate the handling of Alarms. An **Event Handling Program** provides a single interface from which all Inputs and Outputs may be activated or deactivated.

Individual **Actions** may be defined, and Actions may be grouped into multi-step **Processes** which can be initiated automatically or manually.

Groups of **Inputs** and **Outputs** can be defined. A group of inputs is called an **Alarm Zone**. For example, an Alarm Zone might be made of 'all the Intrusion Detectors in a department' – thus allowing all these detectors to be activated ('armed') at once when the last employee leaves the area of the department. Similarly, Outputs can be grouped - an example might be 'all the door relays in the building' – which would allow all doors to be opened by a single action in an emergency.

Reflexes may also be defined, so that Alarms on one controller can activate Processes on the same or different controller(s). Thus an alarm condition in one location can be signalled somewhere else, or the lighting and air conditioning in one section of the building can be switched on or off when a particular badge is read at the main entrance or exit of the site.

Counters may also be defined so that Actions can be triggered when certain conditions have been met, such as an area being empty, or a designated number of people arriving at a particular area. Counters can also be configured to report on system events such as multiple badge re-tries, or to set up thresholds for special action after conditions such as repeated communication faults.

1.5.2 WORKSTATIONS

Support for workstations enables a user on any remote computer that is connected to the main Application PC and is defined as a Workstation, to access the system. Thus, multiple stations can be used to manage the system, input new data, etc.

Because each user may have their own specific Authorization Level, operators with specific responsibilities can be limited to what they may access, regardless of which workstation they use to log on – for example, a clerk may be authorized to see only the cardholder information, a receptionist to handle visitors, temporary badge allocation and cardholder queries, and a guard to handle only alarms.

1.5.3 GUARD TOURS

The Guard Tour facility allows various points on the premises to be defined as making up 'Guard Tours'. These points may be simple alarm points such as pushbuttons and key-operated switches, or specific readers where the guard must pass a badge. Parameters are set to indicate acceptable arrival delays. Once a tour is started, the system will monitor arrival at each successive point, report on progress, and raise an alarm if the guard does not access a point at its scheduled time.

1.5.4 PARKING

The Application can define, monitor and control access to designated parking areas. The software monitors the available space of parking zones with respect to defined groups of users, and can also maintain updated parking records.

1.5.5 LIFT

The Application provides a solution for supervising access in lifts. Cardholders pass their badges through a reader associated with the lift, and press the required floor button as usual. If access is granted, the authorized buttons will be activated allowing the lift to go to the requested floor. In the case of buildings shared by several firms, people can be limited to only be able to select those floor(s) specifically associated with their company and specific shared floors, such as the lobby and parking areas where applicable.

1.5.6 VIDEO (CCTV)

Using the Video module, system events (such as input alarms, cardholder access at predetermined points, etc.) may be associated with Video systems which the user has installed. When the system senses an event that is designated in this way, then a signal is sent to the Video system to mark the recording stream so that the recording of the event as being associated with the event. The signal includes parameters to define starting point and the length of the recording to be designated. This allows relevant recordings to be retrieved and examined together with the information about the event.

1.5.7 BADGE PRINTING

The system allows users to define multiple badge layouts and print badge information directly from the information held regarding cardholders.

New badge layouts may be defined and stored, and then selected as appropriate for specific cardholders.

1.5.8 LICENSE PLATE RECOGNITION (LPR)

The system supports external LPR systems, and grants access to a cardholder based on a car registration number.

1.5.9 MULTI COMPANY (MULTI TENANT)

The Multi-Company option allows the system to differentiate between different groups of cardholders and different parts of the installation, so that each group may only access those parts of the installation for which they are authorized, and designated shared facilities (lobby, parking, etc).

- A single server controls the whole system
- System operators (as defied by their logon credentials) may only access and modify data for their own parts of the system.
- Separate user workstations and separate reporting are supported.

1.5.10 MULTI-SITE

The Multi Site module allows all the records in the database (controllers, readers, cardholders, etc.) to be divided into different **Sites**. Each user of the application can be authorized to view/modify one or more Sites. This module is highly useful for organizations with several independent branches that wish to let local branches view and control only their own sites, while still retaining the ability for overall management to be done from the site headquarters. You can imagine an organization with 2 branches, CityA and CityB. Using the

Multi Site module they can assign each item to one of the 2 cities and then have three types of application users: ones that can view & manage only the CityA branch, others for CityB only, and one or more that can see and update all items of both from the same screen as if they were both one common branch.
The Multi Site module also offers the ability to split the communication load between servers so that each local site has its own independent server, so that (in our example) CityB site can update controllers and receive events to/from CityB controllers even when the CityA server is down - all that is needed is connection to the DB.
(Independent DBs may be achieved using the Microsoft **SQL Replication** tool).

1.5.11 ADVANCED T&A (T+)

The T+ Time and Attendance module provides considerable additional detail for installations needing to process T&A information. Time recorded for cardholders can be analysed into work- and non-work hours. Specific transaction codes indicating start- and stop-times of regular work or specific jobs may be associated with clockings at different readers. Employees' work patterns can be applied to clocking information so as to provide analysis into short-, normal-, and overtime categories, also accumulated into regular or job-specific totals.

Export tools facilitate transfer of the data captured by the system to external payroll processing applications.

1.5.12 SQL

The basic system uses Microsoft Access® as the default database. For large sites, the SQL module interfaces with external SQL-driven systems.

1.5.13 OPC AND MODBUS TCP

The OPC and Modbus modules implement industry-standard interface specifications and protocols, so that the system can exchange control signals and other information with other subsystems.

1.6 BASIC CONCEPTS

In this section:

- *Weekly and Daily Programmes, Time Zones*
- *Cardholders*
- *Badges*
- *Controllers*
- *Alarm Input Basics*
- *Output Basics*
- *Actions, Processes & Reflexes – Basics*
- *Counters*
- *The Big Picture*

1.6.1 WEEKLY AND DAILY PROGRAMMES, TIME ZONES

Weekly Programmes (which are made up of Daily Programmes with their associated Time Zones) are an important concept in the system. As any event occurs (e.g. a badge is passed at a particular reader, an Input status changes, etc), the system compares the actual time against the Daily Programme associated with that event, and acts in accordance with the rules set for the current Time Zone in that Daily Programme
(i.e. a Reader uses Security Mode 1 or 2, an Input is regarded as armed or disarmed, etc.)

DAILY PROGRAMME ('TIME ZONES')

Daily Programmes allow segments of time to be defined during which a particular set of rules may be applied. Each Daily Programme allows blocks of time in a 24-hr period to be set to **green** time periods and **red** time periods. These are referred to as **Time Zones**.

By default, the system has two predefined Daily Programs:

- 'Always' which is a **green** period all day long (from 00h00 to 23h59)
- 'Never' which is a **red** period all day long.

WEEKLY PROGRAMMES

Daily programmes for each day of the week may be grouped together to form different **Weekly Programmes**. Weekly programmes also cater for additional days defined as 'holiday' or 'special days'.

By default, the system has two predefined Weekly Programs:

- 'WP always' which associates each day of the week and the holidays to the Daily Program 'Always'
- 'WP never' which associates each day of the week and the holidays to the Daily Program 'Never'

HOW TIME ZONES CONTROL CARDHOLDERS, READERS, INPUTS & OUTPUTS

	'Green' periods	'Red' periods
Cardholder Access System checks whether the cardholder has access rights at this particular reader, and if so, what Weekly Programme is to be applied	Access may be granted	Access denied
Readers Rules of Access Mode to be used at this reader	Security Level 1	Security Level 2
Alarm zones (Input Groups) or individual **Inputs**	Armed	Not armed
Outputs Groups – activated by Reflexes	Activated	Not activated

DEFINITION OF TIME ZONES, DAILY AND WEEKLY PROGRAMMES IS VERY IMPORTANT

Caution Properly defining the time segments in Daily Programmes is essential for the system to work optimally. It is highly recommended to successively specify the Daily, Weekly and Holiday programmes prior to defining the other parameters of the system.

1.6.2 CARDHOLDERS

Managing cardholders is the main purpose of the system. It allows:

- Definition of cardholder's regular personal information (Name, Address, photos, car license number, etc.). The system also allows customized cardholder information to be defined
- Definition of where, when and how cardholders may access to restricted zone.
- Authorization of specific cardholders to perform operations such as arming/disarming alarm zones, turning on or off lights, operating air conditioning system, etc.

All this information is programmed via the *Cardholders* screen.

Cardholders' authorizations linked with access points are down-loaded to the controllers which manage these access points. This information includes the cardholder card code, i.e. the code of the badge issued for this cardholder.

When a badge is passed at a reader, the controller to which the reader is attached uses the card code to search its internal tables to find the cardholder access information. Using this information, the controller checks whether to grant or deny the request, according to the authorisation of this cardholder (time zones, cardholder parameters, etc.). Because a full local database is stored in the controller memory, this verification is done locally, without central PC intervention, and therefore it is performed instantly. Once the access has been granted or denied, the controller stores this transaction in its Last Event Buffer, which will be read by the central PC during its next interrogation ('polling').

If the code read from the card is not found in its tables, the controller records an 'unknown badge' transaction.

1.6.3 BADGES

A card or badge is a physical device that has a unique code by which the system can identify it (by 'reading' or 'passing' the badge at a 'reader'). Generally, this badge code is unknown to the user. Each badge's code must be registered in the system memory, and the badge can then be associated with a particular cardholder by an enrolment process. During this process, the system attributes to the cardholder an internal system 'Card number' that is used as an Id for the system.
When a badge is read at a reader, the controller to which the reader is attached first checks if the badge is known (i.e. its card code is recorded in its database) and if so, to whom it is associated, in order to check the access authorization of the cardholder.

The reading technology is defined in the *Reader/General* screen and Badge technology of the badges themselves is defined in the *Badge* screen. The technology must be the same as the one selected on the controller electronic board through its technology selection jumpers.

The *Badge* screen is used for defining new badges. This can also be accessed directly from the *Cardholder* screen. Details can be entered manually, or a new badge code can be captured by swiping the card at a reader.

Where a site uses more than one badge type, cardholders may be defined with multiple badges.

1.6.3.1 CARD TECHNOLOGIES AND FORMATS

Numerous card technologies are available: Magnetic, bar code, Wiegand, proximity, smart cards, etc. The Application and the controllers designed to be used with it are compatible with the majority of reader technologies on the market today.

The Reader technology is defined in the *Reader/General* screen. All readers on a particular controller must use the same technology, and the definition set in the screen parameters must match the one selected on the controller electronic board through its 'technology selection' jumpers.

Badge technology is defined in the *Badge* screen.

Within each particular technology, a number of formats may be used (Magnetic ISO1 or ISO2, Barcode Code39 or Interleaved2-of-5, Wiegand Decimal 26 or 32 bits, Wiegand Hexadecimal 32 or 44 bits, etc.). This format is defined in the *Reader/Miscellaneous/Badge format* screen.

Furthermore, the system may check the presence of a facility code (site code) in each card.

The following variations are allowed within an installation:

- Each **Controller** supports readers with the same technology but the readers may read badges of that technology with different card code formats.
  Therefore, when a controller is initialised, only cardholders which get the same card technology than the controller' readers are donwloaded in this controller database.
- Each **Network** may support controllers which have different technologies.

There are several reasons why a user may need to support variations in badges and readers on an installation. Common reasons are:

- Two organizations with different badge types already in use wish to merge their security on a site.

- An organization finds that their badge supplier has moved or gone out of business. A new badge supplier does not support the older type, and they do not want to discard their existing badges
- An organization has a high-security application in one area and want to introduce biometric readers and new cards, but their existing cards do not have a compatible format with the cards supported on the Biometric system's readers.

1.6.4 CONTROLLERS

A controller is a microprocessor-based electronic circuit board with a large onboard memory for storing the various parameters to be monitored, such as cardholders, time zones, reflexes, etc. Controllers are connected to the central system via dedicated Networks and the onboard parameters for each controller are downloaded to them from the central system.

A controller supervises the following components of the security system:

- **Readers** (and their corresponding doors)
  Various types of readers may be supported, although installations normally only have one type. Where more than one type needs to be supported, these may not be mixed on a particular controller.
- **Inputs**
  Controllers have banks of inputs, i.e. electrical connection points that may be connected to external sensors/detectors to sense external events (Door contacts, Door remote control (called 'Request-to-Exit' or 'RTX'), Motion detectors, Passive infra-red, etc). These are usually used for alarm management.
- **Outputs** (Relays)
  Controllers have multiple Outputs that can activate external devices. (doors locks, audible signals, indicator lights, etc.)

Readers, Inputs and Outputs are user programmable from the *Controller* screen.

1.6.5 ALARM INPUT BASICS

A Digital Input or Alarm Input is a controller input point to which a sensor/detector is connected (examples - magnetic contacts, movement detectors, door contact device to reflect the door position, etc…). In general, controllers have by default 4 or 8 inputs and may be extended to 16 or more. The two input status open or closed correspond to the two possible physical status of such sensor/detector: open or closed.

For details of the number of inputs available on different types of Controller, see *Controller Types*

When armed, inputs may raise an alarm either:

- immediately when activated
  (i.e. when their status changes from 'alarm-off' to 'alarm-on')
  or
- after a pre-defined delay.

Inputs can be grouped together into 'Inputs Groups' also called 'Alarm Zones'.

ARMING INPUTS

An input is armed or disarmed in two ways:

- **automatically,** if the Input (or the Alarm Zone to which it belongs) has a *Weekly Programme* associated with it.
  Weekly Programmes divide time into **green** and **red** periods. The Input is 'armed' (i.e. may raise an alarm) only during times corresponding to the **green** periods (Time Zone 1) of this Weekly Programme. It is automatically disarmed during the **red** periods (Time Zone 2).
- **manually,** through specific *Actions*.

The *Controller/Input* screen allows defines of the Input's parameters (Type, normal status, alarm delay, etc..)

The *Event handling programme* screen allows Weekly Programmes to be associated with the Inputs or the Input Groups.

Door control: When a door contact device is connected to an Input that is defined as a 'door alarm', this input manages the door's two possible states: **open** or **closed**. An alarm is activated if a door is forced or left open beyond the specified 'door alarm delay' period

Exit request: When an RTX button ('Request-to-Exit') is connected to an Input that is defined as 'door remote', this Input may control the door: pressing this RTX button activates the corresponding door relay. Depending on the parameters, this action may or not raise an alarm.

(See *Default Connections for Inputs, Relays and RTX*)

ALARM MONITORING

The status of the Inputs is shown in the *Active Alarms* screen (or the advanced *Active Alarms* screen if the G+ Graphics module is used). This is accessible from the Main menu tool bar.

(For detail, see *Alarm Inputs* and *Alarm Zones* below)

1.6.5.1 ALARM INPUTS

An **alarm input** is a physical controller input to which any sensor/detector (fire, intrusion etc..) may be connected.

There are 2 kinds of inputs:

- **2-state input** allows detection of 2 states of a detector: **open** or **closed**
- **4-state** or '**supervised' input** allows detection of 2 states of a detector as well as the 2 alarm states of the electrical line which connects the detector to the controller: **shorted** or **cut**

INPUT PARAMETERS

Each input may have the following different parameters:

Weekly Programme

When a Weekly Programme is associated with an Input, the Input is automatically armed during the 'green' periods of this Weekly programme and disarmed during the 'red' periods.

A Weekly Program is associated with an Input as follows:
Either:

- By associating the Input to an Alarm Zone (or Input Group)
  (in the *Event Handling/Input Group* screen)
  and then associating a Weekly Program to the Alarm Zone
  (in the *Event Handling Programme* screen with the option 'view group of inputs' selected).

Or:

- Through the *Event Handling Programme* screen, with the option 'View inputs' selected.
  (When a Weekly Program is associated, a green '√' is shown near the 'included' indication.)
  If the Input is part of an Alarm Zone, it is *recommended not to* associate a Weekly Programme to the individual Input (i.e. when 'View Inputs' is selected, leave the red 'X' to the left of the Input on the screen where 'View inputs' is selected).

Input delay type

The following types of delay may be defined for an Input:

- **No delay**: An alarm is raised as soon as the input is activated
- **After… (if on alarm)**: Specify the number of seconds beyond which an alarm is raised if the input is still activated after this delay
- **After… (even if no more on alarm)**: Specify the number of seconds beyond which an alarm is raised, even if the input is no more activated after this delay.

Input Normal Status:

The sensor/detector connected to the input has 2 physical states: **open** or **closed**.
The Input Normal Status defines which one of these 2 states is the 'Normal' state, i.e. the no-alarm state of the sensor/detector. This state is the logical state '**off**' of the input.
For example, if the 'NC' (Normally Closed) state is chosen, the input will be under its alarm state (or in its logical state 'on') when it is opened (i.e. not shorted by the sensor/detector to the 0v).

TABLE OF THE DIFFERENT DIGITAL INPUT STATES

Physical state	Normal state	Logical state	WP Activation	Alarm state
Open	NO	Off	Armed	
Closed	NO	On	Armed	Activated
Closed	NC	Off	Disarmed	
Open	NC	On	Disarmed	

Icons:

Input delay, type, normal status and icons are defined in the *Controller/Input/General* screen
Different icons may be selected to represent the two different logical states of the input ('off' or 'on') in a map.

Door Alarm input

Any input may be used to detect the state of a door and raise an alarm if the door is forced or left open more than a pre-defined 'Door alarm' delay.

This is done by connecting a door contact to an input, and by selecting this input at the 'Door alarm' field of the *Reader/Door control* screen.
The door alarm delay is defined in the *Reader/Access Mode* screen.
Note that for such a door alarm input, the input delay type of this input (defined in *Controller/Inputs/General* screen) is not relevant.

Request to exit (RTX) input

A switch may be connected to any input and be used to open the door. The input selected for this purpose must be defined in the 'Door remote input' field of the *Reader/Access Mode* screen.
When the door is open via the RTX input, an alarm is raised if the door is left open more than the pre-defined door alarm delay.
Note that when an Event Weekly Program is attributed to such an RTX input , the button is active and raises an alarm during the 'green' periods of the Weekly Programme but doesn't open the door (and doesn't raise an alarm) during the 'red' periods of the programme.

1.6.5.2 ALARM ZONES (OR INPUT GROUPS)

(Requires Alarm Module)

Inputs may be grouped into Zones (called 'Alarm zones' or 'Input groups') and such zones may be armed or disarmed, either automatically by attributing a Weekly program (Zone are armed during the green periods of this program) or manually through actions (through the *Event Handling/Action* screen). When a zone is armed or disarmed, all the alarm inputs belonging to the zone are armed or disarmed.

- Alarm zones are defined through the *Event Handling/Input group* screen.
- A Weekly Program is attributed to an Alarm zone through the *Event Handling Programme* screen, with the option 'View group of inputs' selected.

These input attributes, i.e. the Alarm zone to which it belongs and a possible Weekly program attributed to the zone are shown in the *Controller/Inputs/Alarm Status* screen of this input.

1.6.6 OUTPUT BASICS

Controller **Outputs** refer to the output contacts of a controller relay. In general, controllers have 4 relays (by default – this may be extended to 16 or more). Such relays provide a 'dry contact', and may be regarded as an electrical switch which can be either open or closed. When the relay is closed, the device (door, siren, etc.) which is connected to the relay is activated, assuming that it is powered-on.

The output state is the state of the relay, i.e. closed (or activated or 'on') or open (or deactivated or 'off').

An Output is opened upon specific events as follows:

- Access granted (in the case of an Output which controls a door opener)
- During time period defined by a Weekly Programme associated with the Output
- According the status of the Alarm Zone (armed or disarmed) associated with the Output.
- By pre-defined automation steps (Reflexes, etc.)
- By manually invoking a Process (one or more Actions).

The *Controller/Output* screen allows to definition of the Output's parameters (Weekly Programme or Input Group associated, Icons for status representation, etc..)

The *Controller/Local Reflex*, the *Event Handling/Action* and the *Event handling/Global reflex* screens allow definition of automation steps to activate Outputs.

The *Active Alarms* screen (*Active Alarms G+* if Graphics + module is used) shows the status of the Outputs and allows them to be manually activated.

1.6.7 ACTIONS, PROCESSES & REFLEXES – BASICS

(Requires Alarm Module)

ACTIONS

An Action is a single command executable by the application or by a controller.

Examples of actions:

- activate a relay,
- arm or disarm an input or an alarm zone,
- display a message,
- print a report,
- invalidate a cardholder, etc.

All Actions that are available in the application may be selected from the *Event handling/Action* screen.

For a list of all Actions, see *Types of Actions with Parameters*

PROCESSES

A Process is a list of Actions which must be executed together. Processes are created in the Event Handling/Process screen. When the Process is invoked, the Actions will be executed one after another.

Processes may be triggered by the operator from the Manual Action/Execute Process screen.

REFLEXES

A Process can also be executed automatically when a pre-defined event occurs. This event may be an access granted or denied, the start or end of alarm, a user login or logout, a scheduler, etc. This pairing of 'Event –> Process' is called a **Reflex**.

KINDS OF REFLEXES:

Local Reflex

A **Local Reflex** is the activation of one or more relays triggered by the changing state of an Input *on the same controller*.
Local Reflexes are defined per controller, on the *Controller/Local Reflexes* screen.

Global Reflex

A **Global Reflex** is the activation of a process, executed by the central system, and triggered by a pre-defined event which can occur *anywhere in the system* (i.e. originating at the PC itself or at any controller).
Global reflexes are defined via the *Event Handling/ Global Reflex* screen

Examples of Global Reflexes:

- Play a recorded message (previously stored as a file) on the arrival of a specific person
- Activate a camera in an affected area and display the image
- Issue an alert on the arrival of a specific person

- Send a message to an employee when he badges
- Arm or disarm alarm zones according to their population
- Switch on the air conditioning in the office of the employee that badges at the entrance
- Light a red light if a parking is full

Network Reflex

A **Network Reflex** is the activation of a Process, executed by a controller, and triggered by a pre-defined event which can occur in any controller *on the same network* and which can affect another controller *on a same network*
(e.g., activate a relay on a controller triggered by an alarm on another controller on the same network).
Network Reflexes are defined in the same way as Global Reflexes using the *Event Handling/ Global Reflex* screen, but are executed without any central station (application) intervention.

1.6.8 COUNTERS

Counters are program objects which can be incremented and decremented and will execute preset actions when predefined conditions are satisfied. Counters may be used as tools that store values, compare them against preset values whenever their value changes, and activate one and/or another Process if the 'compare' condition is satisfied or not satisfied.

Counters are incremented or decremented by 'Increment Counter' and 'Decrement Counter' Actions. Each time the value of a Counter changes, its value will be compared against its preset Min and Max values, and the user-specified Process will be carried out depending on the result

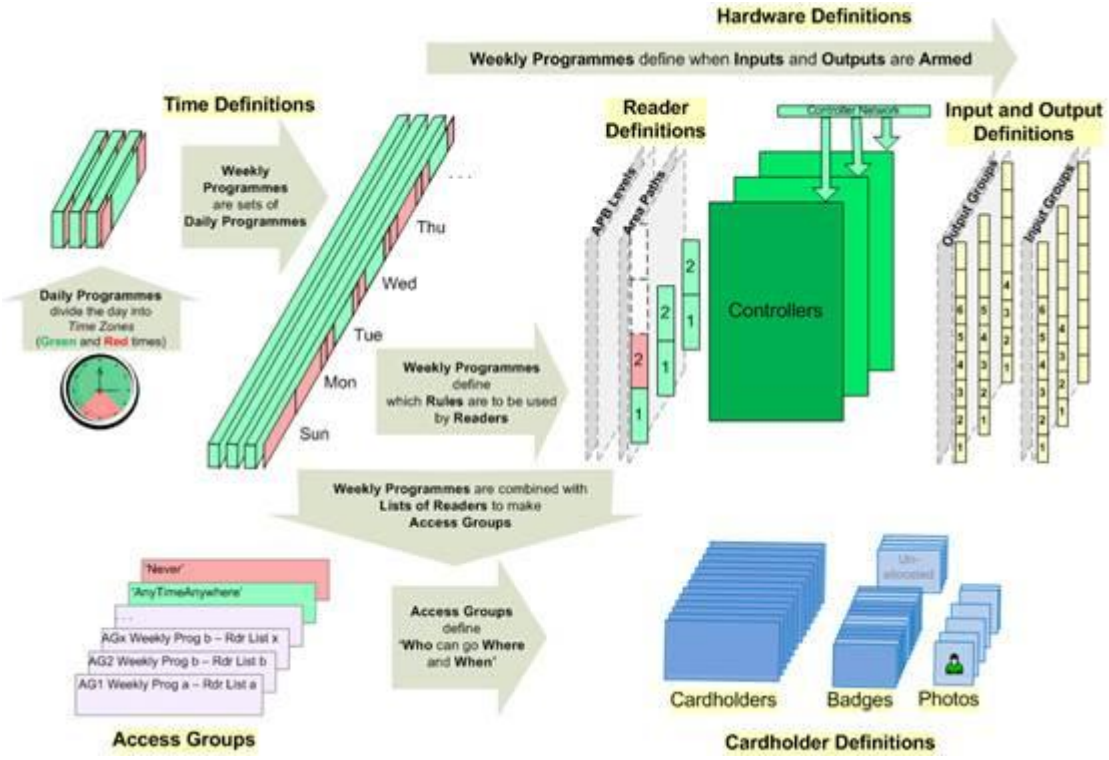
The *Counters* screen allows the user to define Counters, set preset values, choose the compare conditions and set the Processes that must be carried out depending on the result of the compare.

Examples of Counters

- Count the number of persons in a room (so as not to leave a room empty, to signal excess of maximum capacity, to switch office lights off when all the occupants have left, to activate an alarm system when all the employees have left the building, etc.)
- Check as a specific room or cinema fills, and refuse access when capacity is reached

1.7 THE BIG PICTURE

The diagram below is a quick visual reference showing how the main elements of the system interact with one another.



2 QUICK GUIDE

In this section:

- *Setting up the Application*
- *Getting Started*
- *Application User InterfaceTopicAlias*
- *Accessing Help from the Application*

2.1 SETTING UP THE APPLICATION

In this section:

- *Installation Types*
- *Configuration*
- *Software Requirements*

2.1.1 INSTALLATION TYPES

The Application provides centralized on-line security control within any type of installation:

- Big or small installation
- TCP/IP, RS485 or modem networks
- Central or dispersed locations
- Single-company or shared multi-company sites

2.1.2 CONFIGURATION

The Application software can run on a standard Windows® PC with the following minimum configuration:

Operating system

Windows 7®, Vista®, Windows XP Pro®
Windows Server 2003®
Windows Server 2008® (supported from version 2.1)

Computer

Pentium® IV
256 MB RAM
(or 1 GB RAM for installations with more than 100 controllers or with SQL Server)
Compatible with 32-bit or 64-bit processors
500 MB free hard disk space
CDROM Drive
1 free serial COM port for communication or a network card for TCP/IP communication
USB port

Recommended enhancements

Sound Card
Speakers
SVGA definition (800*600)

Controllers

Wide range of compatible proprietary controllers is available.
Consult with your reseller for further information.

Readers

The vast majority of readers available on the market are compatible with the controllers that are supplied with the system: magnetic, proximity, bar code, smart card, biometry, Wiegand, contact, infrared, Watermark, keypad, etc.
Consult with your reseller for further information.

Other Components

In order to successfully install and run the Application, other materials are required. These vary according to each installation: computer network, devices to open doors, alarm detectors, etc.
Consult with your reseller for further information.

2.1.3 SOFTWARE REQUIREMENTS

.NET FRAMEWORK

This version requires Microsoft® .NET connection software version 2.0. If it is not already installed on the PC, it is available for download from Microsoft at:

http://www.microsoft.com/downloads/details.aspx?familyid=0856eacb-4362-4b0d-8edd-aab15c5e04f5&displaylang=en

INTERNAL MESSAGING SOFTWARE

The system uses software developed by Spread Concepts LLC for use in the Spread toolkit. For more information about Spread see *http://www.spread.org*.

NETHASP SUPPORT FOR TERMINAL SERVER APPLICATION COMPATIBILITY

The Application can work either from a Terminal Server PC or from a Terminal Client. However, this requires a NetHasp® dongle to enable the Terminal application. The Terminal Client workstation normally looks for the installed dongle on the PC. The special NetHasp dongle (looks the same but is red), can be physically installed on the Server or on any other PC on the LAN, and is read by the Application through the network.

Operating Mode

1. Order the special NetHasp plug (looks the same, though it is coloured red),
2. Install it on the machine where the Application is installed, or on any other PC on the LAN.
3. Install the "Aladdin License Manager" application on the PC where the plug is physically located. (It is better to install it as a 'Service'. This way doesn't need to log on to Windows in order to make it run after a PC start).
4. Exit the application and look for the <Application>.ini file in the Application folder.
5. Open this file with Notepad and check that the following command exists:

   ```
   NetHasp = 1
   ```

   Note: If this line does not exist, run the application, go to *Tools/Options* and click "OK" at the bottom of the screen. This rebuilds the ini file and inserts all the possible entries according to the latest application version.
6. Set the value to 1
7. Save and close this file, then restart the application.

2.2 GETTING STARTED

In this section:

- *Demonstration Version*
- *Installation of the Application (New or update)*
- *Running the Appplication*
- *Application Information*
- *Local and Remote Restart/Shutdown*
- *Update an Application version*
- *Using the Automatic Update Facility*
- *Installing the Graphics+ Module*

2.2.1 DEMONSTRATION VERSION

A demo version of the Application software is available, allowing prospective users to work with the application, try out the user interface, and see details of all the data fields that are available.

Running the demo version gives access to all functions including alarms, graphics, lift management and time management but it supports only a limited set of devices - two controllers, four readers and ten cardholders.

To run the demo, start the program without using a dongle, and enter the username and password 'dds'.

In order to exceed the demo capabilities and to use the software in a real situation, the software must be licensed and a dongle installed.

2.2.2 INSTALLATION OF THE APPLICATION (NEW OR UPDATE)

Insert the Application Installation CD: the Installation Wizard is automatically launched.
If the Wizard does not start by itself, run the 'autorun.exe' file in the 'autorun' folder of the Installation CD.

Follow the step by step instructions.

> Note: Do not install the application using the 'setup.exe' file of the CD; should you do so, the following warning message will be displayed:
>
> `Setup will not start. Contact your vendor`

Select Setup Language

Current choices include:

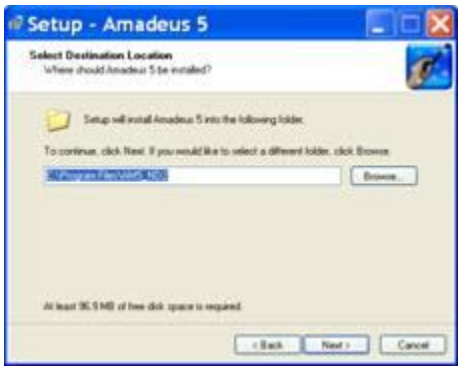
- Chinese
- English
- French
- Magyar (Hungarian)

- Polski (Polish)
- Spanish

Startup Wizard

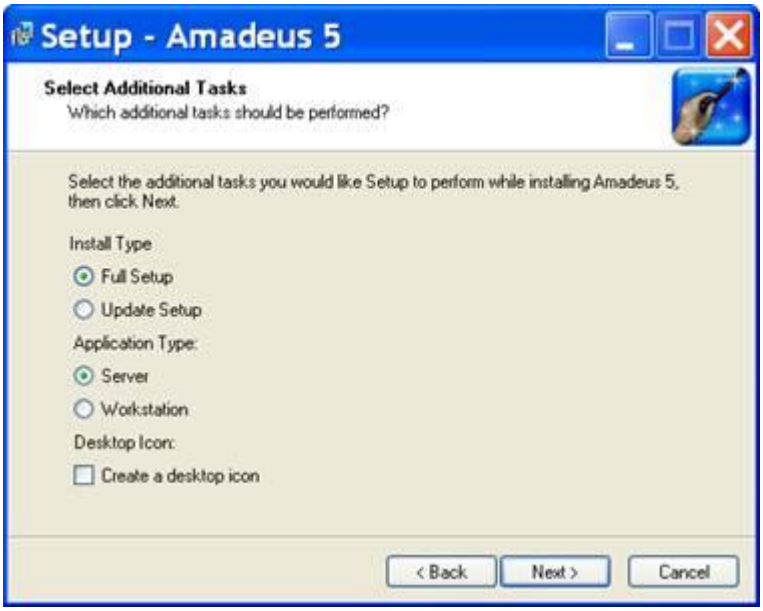
Click **Next**

Set Application Directory



Choose the Directory where the application will be installed.
Clicking **Next** will start the installation process. A progress bar will indicate that the various Application Files are being prepared.

Additional Installation Tasks



The following choices must be made:

Installation Type

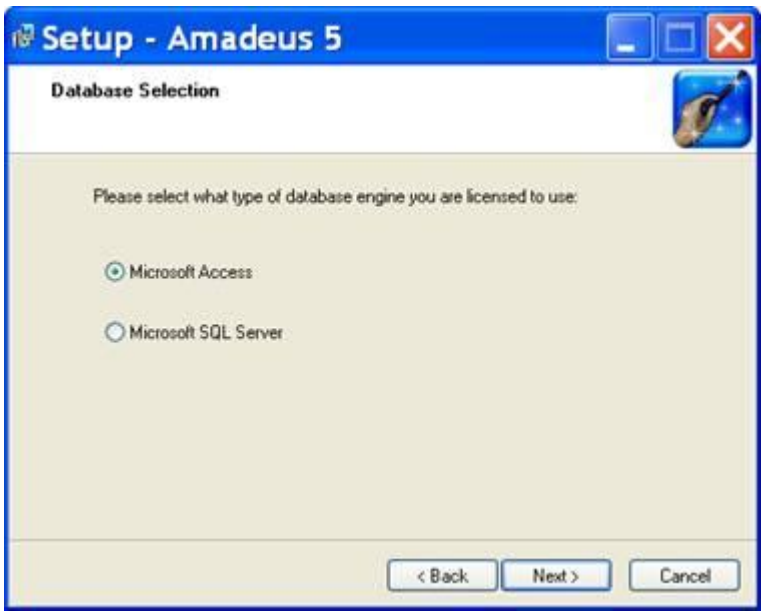
Full/Update Setup

Application Type

If the application runs on one computer only, select 'Server'. If on several computers (i.e. Server/Workstations architecture), do as follows:

1. *Install the application on the computer that will be the Server and specify 'Server' during the installation process*
2. *Share the Application folder to the required Workstation(s)*
3. *Once installed, run the application and define all the computers, Server and Workstation(s), through the Computer screen*
4. Install the application on each workstation and specify 'workstation' during the installation process. It will ask the user to select the Server network path

Database Selection


Setup - Amadeus 5
Database Selection
Please select what type of database engine you are licensed to use:
Microsoft Access
Microsoft SQL Server
< Back
Next >
Cancel

If 'SQL' has to be requested, ensure first that the Microsoft SQL server or MSDE (the SQL server engine) is already running in the computer or in the network and the application dongle has the SQL license.

Installation Complete

Logon

2.2.3 RUNNING THE APPPLICATION

Start the application by double-clicking on its shortcut or by clicking on Start/Programs/<Application>/<Application> from Windows Desktop.

Type the User name and Password and click OK. The application main menu appears on the screen.

Notes:

1. **Significance of lower case and capital letters**
   The "User name" and "Password" fields are case-sensitive. For example: the computer will interpret AFI, afi, and aFi differently.
2. **Three attempts**
   If the user name and the password are not correctly entered after three attempts, the start window will disappear from the screen.
3. **Using the software for the first time**
   It is recommended to change the user name and the password at the first use of the application and to store this information in a secure place.
4. **To skip the user name and password request**
   To start your application without being prompted for a user name and a password every time the application is started, set them in the initialization parameters, as follow:
   - Point the mouse to the shortcut of the application
   - Right click on the application icon
   - Select "Properties"
   - Add the user name and password at the end of the "Target" field (after "<Application>.exe") as follows

     `[space]/us:user name [space]/pw:password`
   - Click OK

2.2.4 APPLICATION INFORMATION

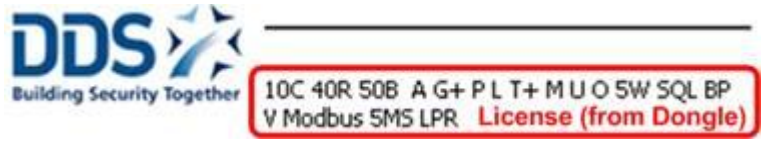
During startup, the application splash screen is shown, with the following information:

Version
The specific version number

User ID
The license ID stored in the dongle

License

Details of configuration limits and all the modules for which licenses have been provided



Configuration limits

nC	Maximum No. ('n') of Controllers allowed
nR	Maximum No. ('n') of Readers allowed
nB	Maximum No. ('n') of Cardholders allowed
nW	Maximum No. ('n') of Workstations allowed (not shown in Demo mode)
LIGHT	Pre-configured Light version

Modules Licensed

A	Alarm Module
G	Basic Graphics Module
P	Parking Module
L	Lift Module
T	Basic Time and Attendance Module
U	Guard Patrol
M	Multi Company
O	OPC Server
SQL	SGL Server
BP	Badge Printing Module
V	Video Module
Modbus	Modbus TCP
nMS	Multi-site ('n'=number of sites)
G+	New Graphics + Module
T +	Time and Attendance + Module
LPR	License Plate Recognition Module

Startup Progress

During installation the progress bar is shown as a bar. The milestones shown below the bar indicate the specific components being processed.

2.2.5 FORCE LOCAL AND REMOTE RESTART/SHUTDOWN

On the *Computer* screen, when pressing Shift+F12 there are 2 buttons enabling Restart or Shutdown of any Application instance. The operation is done through the database thus remote Restart / Shutdown will work even when the Spread is down.

Important: The requests are NOT performed immediately. There can be up to 1 minute delay from the request till the Restart / Shutdown is performed on the relevant Application instance.

2.2.6 UPDATE AN APPLICATION VERSION

To update an application already installed, do one of the two following procedures:

A: USING AN 'UPDATE' FILE

Exit the application and run the 'Update' file (for example: 'update_v1.3.023.exe'). Run it on the Server and on each Workstation.

B: USING A FULL NEW VERSION OF THE APPLICATION SETUP

1. From the Application, save the database and the journal from the 'Tools – Save database' and 'Tools – Save journal' menus.
2. Save the '<Application>.ini' file from the Application folder.
3. Uninstall the Application from the computer.
4. Install the new version in the same folder where the previous version was installed.
5. Copy the saved '<Application>.ini' file in the Application folder, overwriting the existing file.
6. Enter the application. If the database and the journal have not been automatically restored by the process, restore them using the *Restore database* and *Restore Journal* buttons on the *Tools* Menu

2.2.7 USING THE AUTOMATIC UPDATE FACILITY

An automated update facility is provided. This allows all computers (server/s and workstations) to be updated remotely.

Whenever there is a new version of the application it is possible to set all the servers and workstations to download from an ftp site and install the new version automatically. The application will automatically check each minute to see whether there is an update waiting at the pre-defined ftp location. The ftp location can be local on one of the PCs on the client LAN or even remote on the Internet.

Consult your supplier for details.

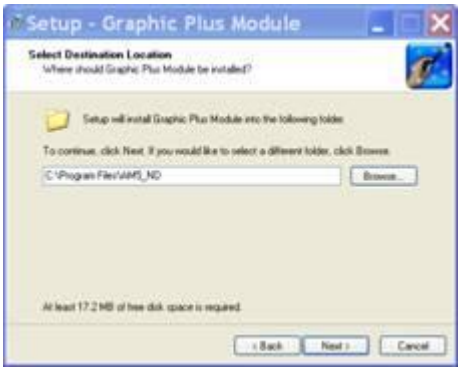
2.2.8 INSTALLING THE GRAPHICS+ MODULE

The Graphics + module is supplied as an Install file (i.e. GraphicsPlusSetup.exe).

1. Close the main application. The Graphics Plus module cannot be installed while the main application is running.
2. Put the Install file in a temporary location and double-click. Select the installation language and click **OK**.

3. Selecting the language and clicking **OK** opens the Install Wizard screen.

4. Clicking **Next** opens the Destination Location screen.



Note: The Graphic Plus application must be installed in the same directory as the main application.

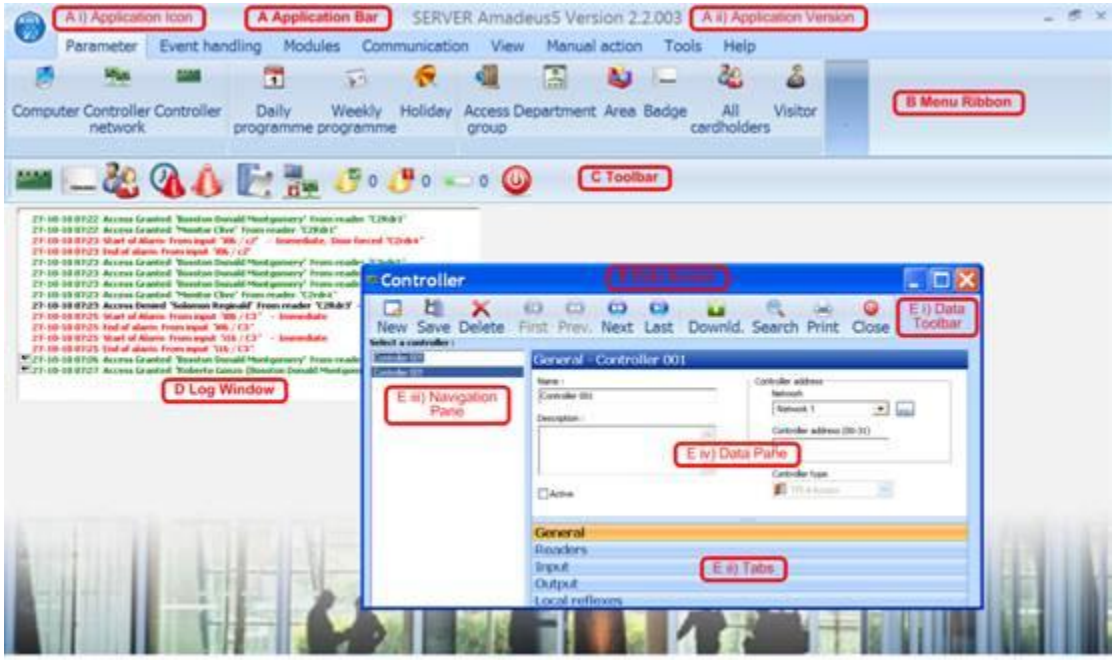
5. Select the target directory and click **Next**.

A progress bar is displayed while the installation is completed.

The Installation Complete window will be displayed when the process is complete.

2.3 APPLICATION USER INTERFACE

The Application provides a simple, powerful user interface.



The following links navigate directly to Help topics covering the User Interface (UI):

UI Ref	UI Element
A	Application Bar
Ai)	*Application Icon*
Aii)	*Application Version*
B	*Menu Ribbon*
C	*Toolbar*
D	*Log Window*
	Default Log Window
	Scrolling the Log Window
	Split Log Window
	Rich Log Option
	Advanced Log Options
E	*Data Screen*
Ei)	*Data Toolbar*
Eii)	*Data Window Tabs*
Eiii)	*Data Window Navigation Pane*
Eiv)	*Data Window Data Pane*

2.3.1 APPLICATION BAR (A)

This is the title for the main application window. The screen indicates whether this instance of the application is running on the **Server** or on a **Work Station**.

2.3.1.1 APPLICATION ICON (A I)

Clicking on the Application icon opens an Operator menu.

Change Password

Operator can change password

Log off

The current user is logged off. A new logon is required

Exit

Exits the application

Notes:

1. The ini file entry *PasswordExpireAfter_Days* = n will make the User enter and confirm a new password after n days
2. The ini file entry *AllowReuseUserPassword* = 0 prevents the User from re-using a password.

2.3.1.2 APPLICATION VERSION (A II)

The current version number is displayed on the Application Bar for all screens.

2.3.2 MENU RIBBON (B)

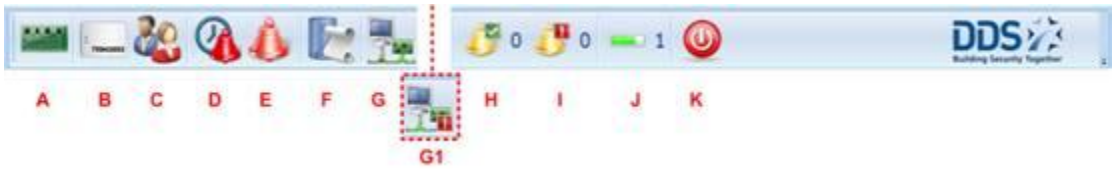
The Menu Ribbon has 8 pull-down tabs, each with set of entries, grouped into related functions.
Clicking on a tab opens the detailed Menu Ribbon for that tab function.
All function screens in each of the Tabs are described in the corresponding Chapters.

Chap 1 *Parameter Tab*
Chap 4. *Event Handling Tab*
Chap 5. *Modules Tab*
Chap 6. *Communication Tab*
Chap 7. *View Tab*
Chap 8. *Manual Action Tab*
Chap 9. *Tools Tab*
Chap 10 . *Help Tab*

Double-clicking on the Tab will keep the detailed Menu Ribbon visible even after a selection is made.
Double-clicking on the tab a second time will minimise it again.

Note: The options displayed depend on the specific licensed options, and on the authorization level of the operator.
Where a low-resolution screen or a partial screen window is used for the main screen, the Main Ribbon is shortened, and a **pulldown button** must be clicked to open the additional tabs.

2.3.3 TOOLBAR (C)



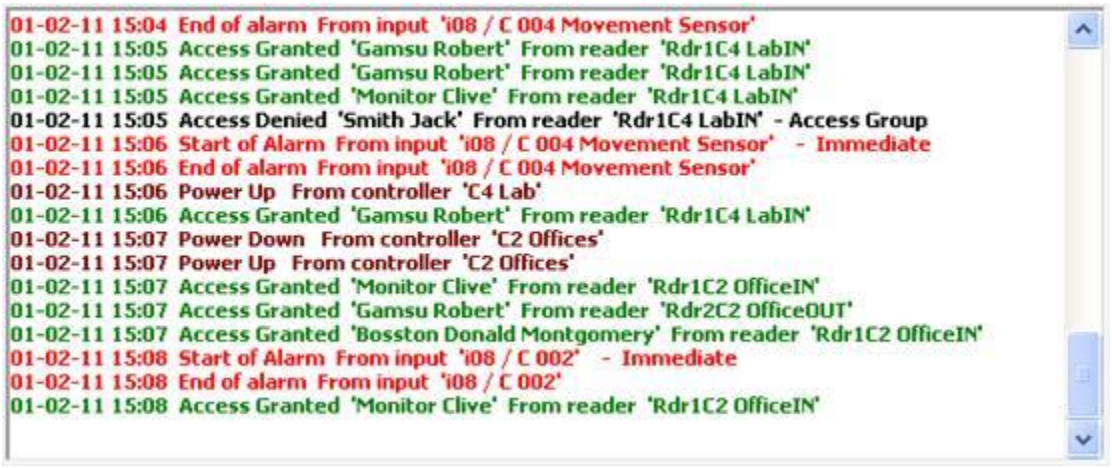
The Toolbar provides access to **frequently-used functions**, shows the **status of communication** with Controllers, and indicates the number of **current and outstanding Alarm Events**.

Item	Function	Notes
A	Controller Definition	
B	Badge Definition	
C	Cardholder Definition	
D	Event Handling Programme	Only shown if Alarm Management Module is installed
E	Active Alarms	Only shown if Graphics Module is installed
F	Report Wizard	
G	Communications	Icon displays animated Polling status Note: This icon should always be animated, with a 'bead' showing messages between the PC and the controllers. If there is no moving 'bead', this means system communications are not working properly
G1	Communications error	Only shown when communications to one or more active controllers has failed for longer than the allowed time (Polling error timeout - *Tools/Options/Communication*)
H	No. Acknowledged Alarms	Alarms are only cleared when 'Confirmed'
I	No. Active Alarms	Current alarms not yet acknowledged
J	No. Pending Commands	Indicates there is data for Controllers that has not been sent
K	Close Application	

2.3.4 LOG WINDOW (D)

The log window is a dynamic display that shows system events as they occur. The types of events to be displayed (and to be saved in the Journal) and the default colours for different types of entries are given in *Tools/Options/Menu* screen. These defaults can be changed using that screen.

2.3.4.1 DEFAULT LOG WINDOW


01-02-11 15:04 End of alarm From input 'i08 / C 004 Movement Sensor'
01-02-11 15:05 Access Granted 'Gamsu Robert' From reader 'Rdr1C4 LabIN'
01-02-11 15:05 Access Granted 'Gamsu Robert' From reader 'Rdr1C4 LabIN'
01-02-11 15:05 Access Granted 'Monitor Clive' From reader 'Rdr1C4 LabIN'
01-02-11 15:05 Access Denied 'Smith Jack' From reader 'Rdr1C4 LabIN' - Access Group
01-02-11 15:06 Start of Alarm From input 'i08 / C 004 Movement Sensor' - Immediate
01-02-11 15:06 End of alarm From input 'i08 / C 004 Movement Sensor'
01-02-11 15:06 Power Up From controller 'C4 Lab'
01-02-11 15:06 Access Granted 'Gamsu Robert' From reader 'Rdr1C4 LabIN'
01-02-11 15:07 Power Down From controller 'C2 Offices'
01-02-11 15:07 Power Up From controller 'C2 Offices'
01-02-11 15:07 Access Granted 'Monitor Clive' From reader 'Rdr1C2 OfficeIN'
01-02-11 15:07 Access Granted 'Gamsu Robert' From reader 'Rdr2C2 OfficeOUT'
01-02-11 15:07 Access Granted 'Bosston Donald Montgomery' From reader 'Rdr1C2 OfficeIN'
01-02-11 15:08 Start of Alarm From input 'i08 / C 002' - Immediate
01-02-11 15:08 End of alarm From input 'i08 / C 002'
01-02-11 15:08 Access Granted 'Monitor Clive' From reader 'Rdr1C2 OfficeIN'

The Log window scrolls upwards, with new events inserted at the bottom in the sequence in which they occur.

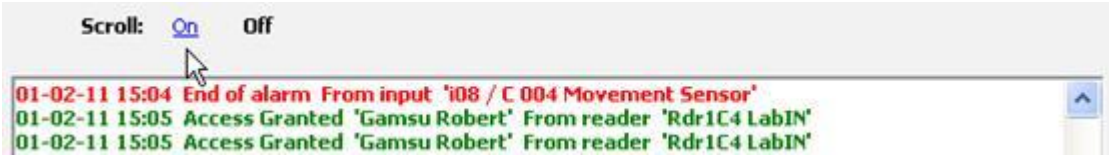
By default, events are displayed in different colours according to type (red for alarms, green for access granted, black for access denied, etc.) The types of transaction to be displayed, and their corresponding colours, are set in the *Tools/Options/Menu* screen

The Log window can be hidden/shown, and the Log can be cleared, using the corresponding buttons in the *Communications* tab.

2.3.4.2 SCROLL ON/OFF

The user may wish to 'freeze' the display so that particular events remain visible even though other events are taking place that would cause the window to scroll.

Setting the .ini option *ScrollLogs* = 1 adds Scroll buttons **On** and **Off** above the log window, and clicking on these buttons allows the user to freeze/unfreeze scrolling of the Log window.


Scroll: On Off
01-02-11 15:04 End of alarm From input 'i08 / C 004 Movement Sensor'
01-02-11 15:05 Access Granted 'Gamsu Robert' From reader 'Rdr1C4 LabIN'
01-02-11 15:05 Access Granted 'Gamsu Robert' From reader 'Rdr1C4 LabIN'

(as soon as the Scroll option is set to 'Off', scrolling will continue, with all events that occurred while the window was frozen being immediately added.)

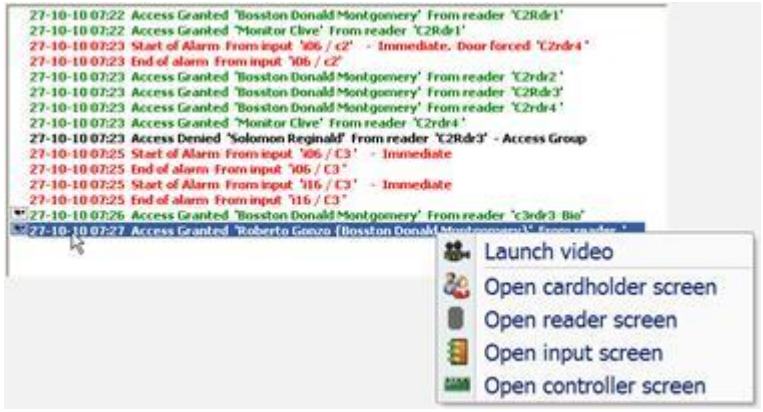
2.3.4.3 SPLIT LOG OPTION

The log window may be split into separate windows with the upper window dedicated to **cardholder** events and the lower showing all **alarm** events. This is set in the screen *Tools/Options/Journal/Log Screen*.

2.3.4.4 RICH LOG OPTION

The 'Rich Log' option provides **Action menus**, accessible by right-clicking on events in the log. The option also provides icons for events associated with video records.

The Rich Log setting is set in the *Tools/Options/Journal/Log* Screen.



Actions available for Access events

`Open cardholder screen`

(displays corresponding Cardholder data)

`Open reader screen`

(displays corresponding Reader data)

`Open controller screen`

(displays corresponding Controller data)

Actions available for Alarm events

`Open input screen`

(displays corresponding input data)

`Open controller screen`

(displays corresponding Controller data)

Video events

When the Rich Log option is used, Video icons are displayed alongside events that are linked to video records.

Two different icons are used:

- Regular Video icon (example above) - Video record linked to an **event** (set with 'Camera' field in *Reader* and/or *Input* screens)
- Video Icon with red background - Video record linked to 'Record video' **Action** (set with a 'Record video' action in *Action* screen)

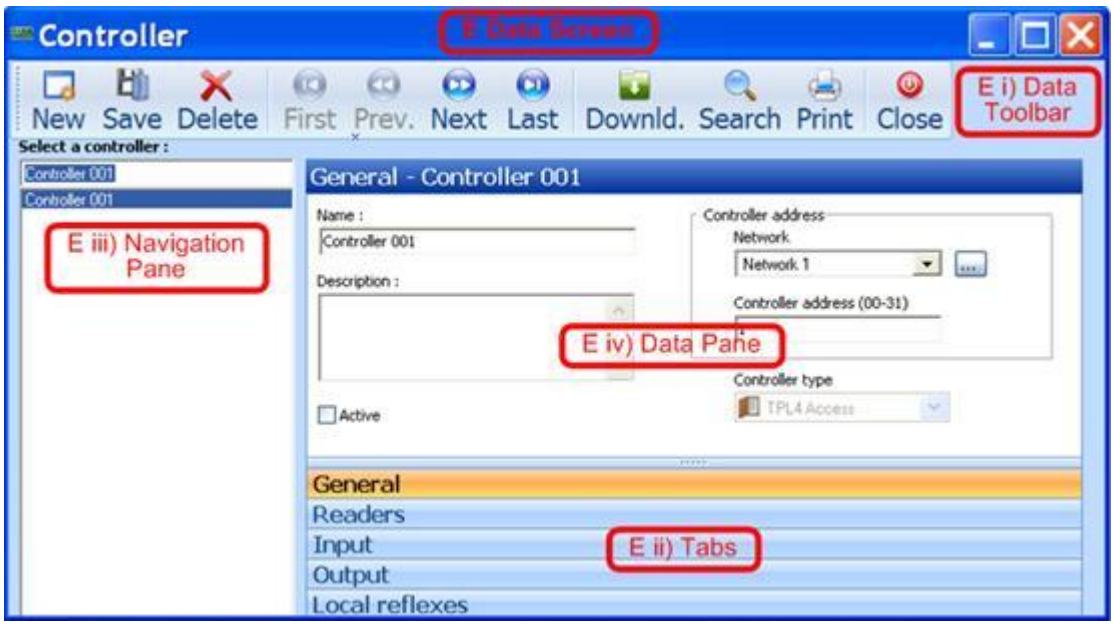
Additional Action available for Video events

`Launch video`

(displays the video recording corresponding to the event) (see *Video* module)

2.3.5 DATA SCREEN (E)

When a selection is made from the Menu Ribbon, a Data Window is shown.



2.3.5.1 DATA TOOLBAR (E I)

All data screens have a common set of icons and support a common set of Function Keys.

Key	Function	Description
F1	Help	Display Help information about the current screen
F2	New	Define a new data entry. If, before pressing the F2 key, existing information has not yet been saved, a message appears requesting the user to save or cancel the changes. Then, a new screen appears for the new data entry with fields either empty or already populated with default values.
F3	Save	Save the current data. Updates the relevant database. If the data contain parameters linked to controllers, the modified Controller parameters are automatically transferred to the corresponding controllers.
F4	Delete	Delete the selected data entry

F5	First	Select the first data entry of the list
F6	Previous	Select the previous data entry
F7	Next	Select the next data entry
F8	Last	Select the last data entry of the list
F9	Download	Transfer all the parameters to the corresponding controllers even if the information has not been modified
F10	Search	Lists all records that match the information entered into any of the fields. Search data may be entered into fields in any of the Tabs (Press **Search** to clear all fields, enter search criteria and press **Search** again)
F11	Print	Automatically generate the report corresponding to the current data entry
F12	Close	Close the current screen

2.3.5.2 TABS (E II)

Several Data Windows have additional Tabs for specific information. Clicking on a Tab changes the Data Pane to display the information for the selected tab, and highlights the selected data record in the Navigation Pane.

2.3.5.3 NAVIGATION PANE (E III)

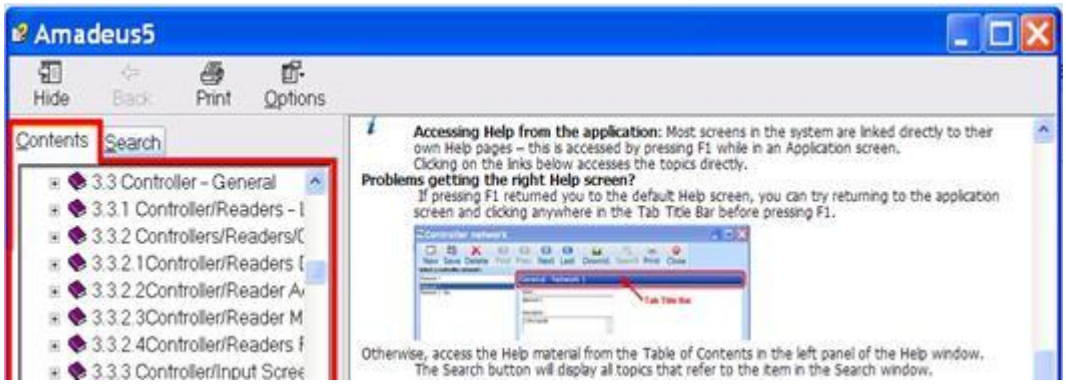
The list of existing records for the selected data type is shown, in alphabetical order. When an item is selected by clicking on it, the relevant data record is shown in the Data Pane.

2.3.5.4 DATA PANE (E IV)

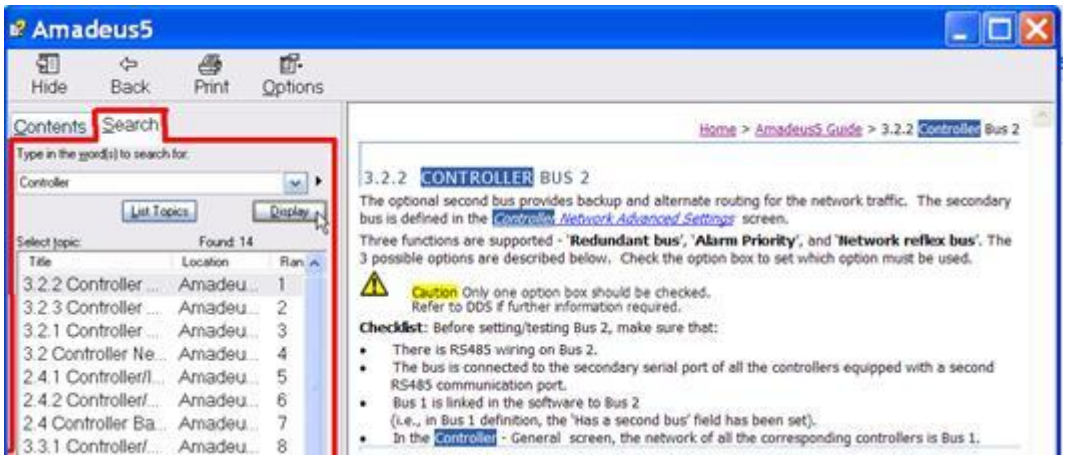
The Data Pane displays all the information for the selected item. When entering a new item, the identifying information (i.e. 'Name' in the case of Cardholders, etc.) must be entered and then **Saved**, before the rest of the new data can be entered.

2.4 ACCESSING HELP FROM THE APPLICATION

Most screens in the system are linked directly to their own Help pages – these are accessed by pressing F1 from the Application screen.
Where specific screens do not have their own links, Help material is accessible from the Table of Contents in the left panel of the Help window.


Amadeus5
Hide
Back
Print
Options
Contents
Search
3.3 Controller - General
3.3.1 Controller/Readers - I
3.3.2 Controllers/Readers/C
3.3.2.1Controller/Readers I
3.3.2.2Controller/Reader A
3.3.2.3Controller/Reader M
3.3.2.4Controller/Readers f
3.3.3 Controller/Input Scree
Accessing Help from the application: Most screens in the system are linked directly to their own Help pages – this is accessed by pressing F1 while in an Application screen.
Clicking on the links below accesses the topics directly.
Problems getting the right Help screen?
If pressing F1 returned you to the default Help screen, you can try returning to the application screen and clicking anywhere in the Tab Title Bar before pressing F1.
Otherwise, access the Help material from the Table of Contents in the left panel of the Help window.
The Search button will display all topics that refer to the item in the Search window.

The **Search** button displays all topics that refer to the item in the Search window.


Amadeus5
Hide
Back
Print
Options
Contents
Search
Type in the word(s) to search for:
Controller
List Topics
Display
Select topic:
Found 14
Title
Location
Ran
3.2.2 Controller ...
Amadeu...
1
3.2.3 Controller ...
Amadeu...
2
3.2.1 Controller ...
Amadeu...
3
3.2 Controller Ne...
Amadeu...
4
2.4.1 Controller/I...
Amadeu...
5
2.4.2 Controller/...
Amadeu...
6
2.4 Controller Ba...
Amadeu...
7
3.3.1 Controller/...
Amadeu...
8
Home > Amadeus5 Guide > 3.2.2 Controller Bus 2
3.2.2 CONTROLLER BUS 2
The optional second bus provides backup and alternate routing for the network traffic. The secondary bus is defined in the Controller Network Advanced Settings screen.
Three functions are supported - 'Redundant bus', 'Alarm Priority', and 'Network reflex bus'. The 3 possible options are described below. Check the option box to set which option must be used.
Caution Only one option box should be checked.
Refer to DDS if further information required.
Checklist: Before setting/testing Bus 2, make sure that:
There is RS485 wiring on Bus 2.
The bus is connected to the secondary serial port of all the controllers equipped with a second RS485 communication port.
Bus 1 is linked in the software to Bus 2
(i.e., in Bus 1 definition, the 'Has a second bus' field has been set).
In the Controller - General screen, the network of all the corresponding controllers is Bus 1.

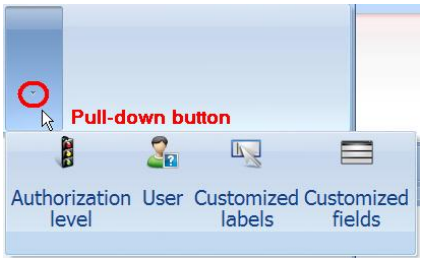
The Search Window includes options to search for titles only, similar words, or limiting the search to previous search results.

All targets words are highlighted.

3 PARAMETER TAB

The Parameter Tab displays the screens associated with setting up the system.

Depending on the screen parameters, the last section of the Parameter menu may be accessed by clicking an additional pull-down button.



Note: In installations that use the Multi-company option, some additional fields are shown. See *Multi-Company Option*.

There are 4 groups of Operator actions in the Parameter Tab:

Configuring the Hardware	Setting up Schedules	Input & Update of Personnel	Other Parameters
Computer	*Daily Programme*	*Access Group*	*Company*
Controller Network	*Weekly Programme*	*Department*	*Authorization Level*
Controller	*Holiday*	*Area*	*User*
		Badge	*Customized Labels*
		All Cardholders	*Customized Fields*
		Visitor	

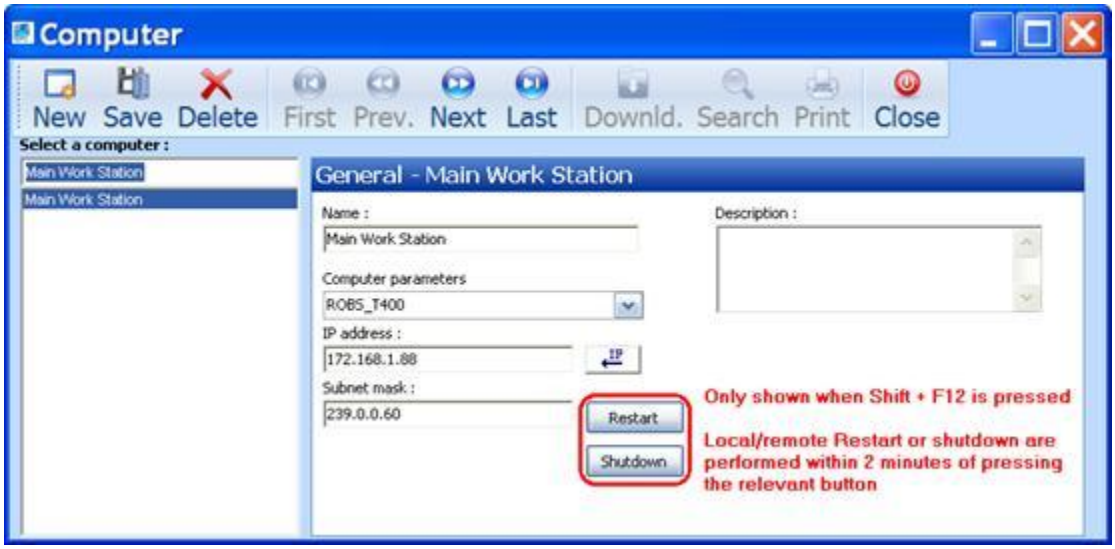
PARAMETER DEFAULT VALUES

When a new item is created (controller, reader, cardholder, etc…), the system creates most of the parameters with standard default values, using standard practices established for the system in the field. For example, see *Default Connections for Inputs, Relays and RTX*.

The user may change these values where required.

3.1 COMPUTER

Define the computer/s on which the application will run and all supported workstations.



The first time the application runs, the fields **Name**, **Computer Parameters**, **IP Address** and **Subnet mask** will be filled automatically, taking the parameters of the machine on which the application is running.

If for some reason the computer is replaced, then in addition to restoring the database on the new PC, the application will request that the operator updates this screen with the new IP address.

Subsequently, this screen is used for defining additional workstations.

Click **New** to start definition of a new workstation.

Name

Free Text

Computer Parameters

Lists of all computers on the network – select the computer on to be used as a workstation

IP address

Clicking the IP arrow will automatically update this field for the selected computer

Subnet mask

New installations: The application can use multicast addressing, and the application uses an **alias** Subnet Mask setting of 239.0.0.60 (multicast address) to enable this. Therefore the application sets this mask as a default in the screen. No change should be made to the Windows settings.

Caution for existing installations using an **actual** subnet mask e.g. 255.255.255.0

The subnet mask value must be the same for the server and all workstations. Where an actual subnet mask setting is used for the server, either the same setting must be used for all workstations, or the server's subnet mask setting must be changed to the 239.0.0.60 alias. The User should verify with their Network Administrator that the multicast address 239.0.0.60 is available for use. If it is already in use by another application, then another value starting 239.0. . should be requested.

Fields only show after pressing Shift+F12

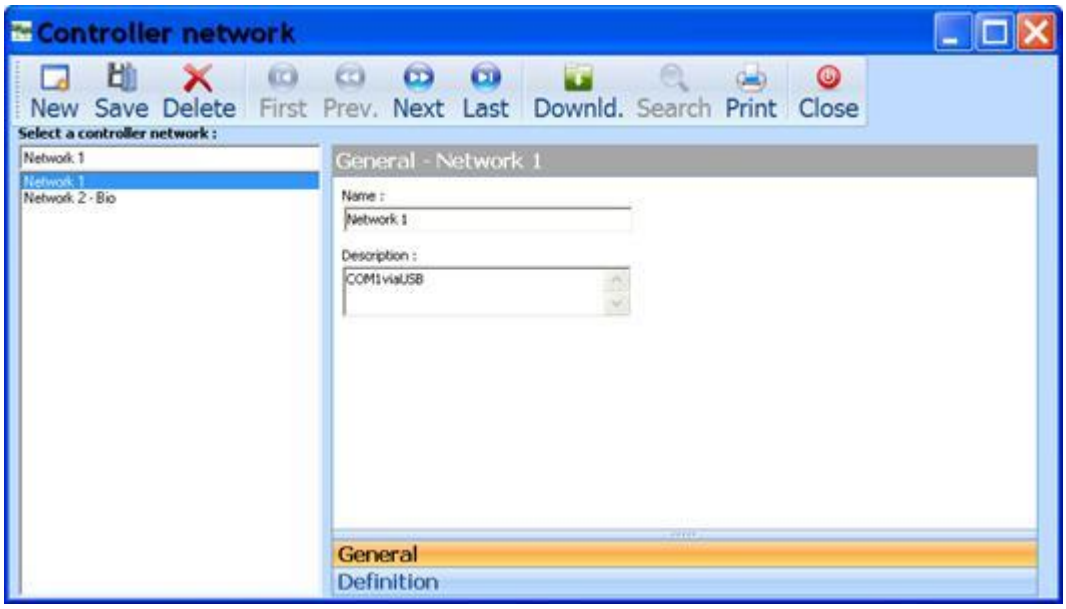
Restart and Shutdown

These will be invoked automatically within 2 minutes of pressing the button. A warning message is presented before the instruction is activated.

3.2 CONTROLLER NETWORK

"Network" refers to the physical/electrical connection by which controllers are connected to a PC. This screen allows a Network to be named, and once this is done, the following *Controller Network/Definition* screens allows input of the required configuration details, depending on the type of Network being defined:

- *Network/Definition - Local Comms Port*
- *Network/Definition - TCP Comms Port*
- *Network/Definition – Modem Comms Port*



Name

Free text. Default name is <Network1> – can be edited

Description

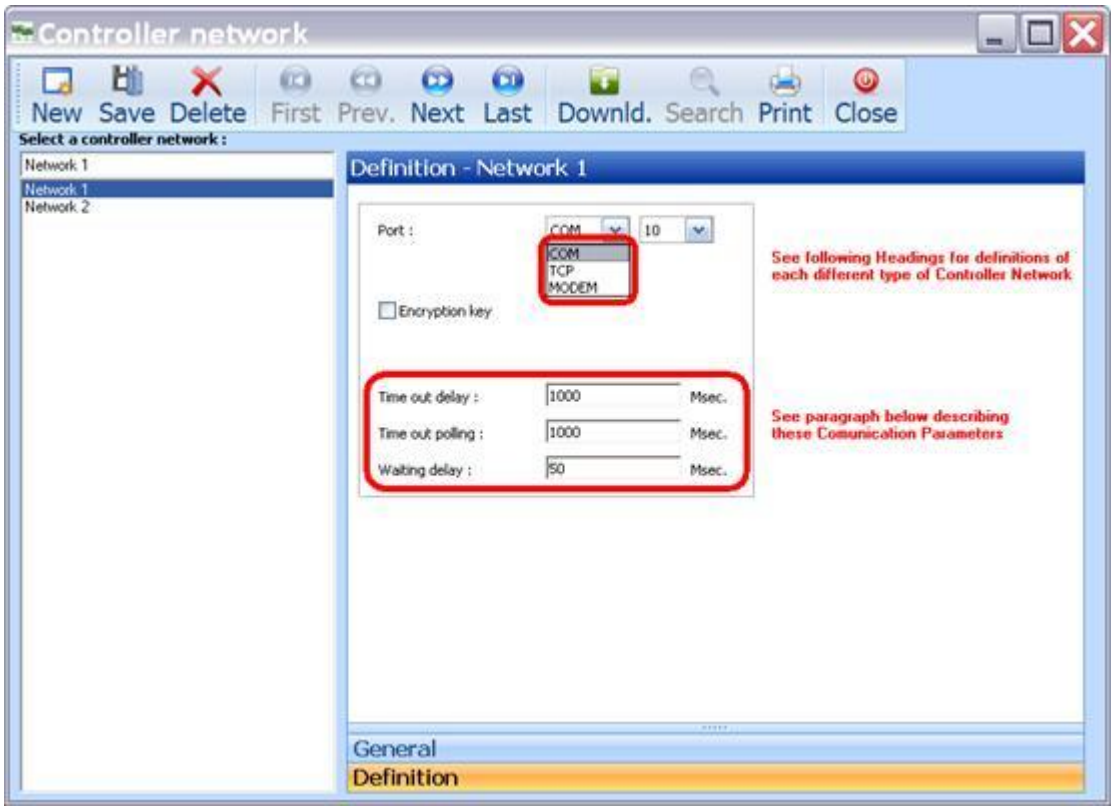
Free text

Notes:

1. **Configuring Bio Reader Network** Bio Readers are connected to regular controllers but also require their own dedicated network for transfer of Bio template data to and from the computer. Separate network/s must be defined for this purpose.
   See *Setting up Biometric Readers*
2. Pressing Shift+F12 allows displays Advanced Network Settings used when setting up a 2nd communications bus for the controller. (see *Optional second bus*)

3.2.1 CONTROLLER NETWORK/DEFINITION

There are three connection methods supported: local communication port, IP network, and remote (modem). This screen allows the definition of networks of each of these types.



Select a Controller Network

Click **New** to define a new network

Port

Select the required connection method

When this selection is made, the additional fields necessary for the selected type of network are displayed. The three possible types of Controller Network are described below in Computer Network Definition screens for *Local Comms Network*, *TCP Network*, and *Modem Network*.

Encryption Key

See *Encryption Key and Communication Parameters*

3.2.1.1 ENCRYPTION KEY AND COMMUNICATION PARAMETERS

Encryption Key

When checked, a 4-digit Hexadecimal (i.e. 32-bit) Encryption Key may be entered. (Min. value: 01 00 00 00 / Max value: 7F FF FF FF)

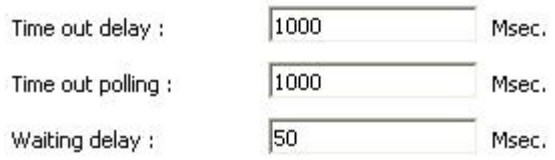
This key secures the data traffic between the PC and the controllers by encoding the information that passes over the communication bus (whether serial or TCP/IP). Each controller network may have its own key. When the PC and the controllers communicate, each data packet is encrypted using this password, preventing a hacker that has a copy of application software from accessing the controllers.

Communication Parameters

For any type of Controller Network, the following Communication Parameters must be defined.

Caution

Defaults of these parameters should only be changed by experienced Communications engineers.



Time out delay (Default 1000 msec – keep this value unless specified otherwise)

Delay in millisecs

The timeout delay is the maximum time within which a controller must answer to a command sent by the system. If the controller does not answer within this time, the system will try n more times (default 2) to send the command

(value set in *Tools/Options/Communication*).

If there is still no answer from the controller, the command will be put in the Pending commands.

Time out polling (Default 1000 msec - keep this value unless specified otherwise)

Timeout in millisecs

Polling a controller means asking it if any events just occurred, i.e. either a card transaction (granted or denied) or an alarm. In polling mode, the system continuously polls all controllers, and they must answer either with an empty message, if nothing happened, or with the last event(s) that occurred.

The 'Time out polling' is the maximum delay, measured in milliseconds, beyond which a controller must answer a poll. If the controller does not answer within this delay, the system will try n more times (default 2) to poll it.

(value set in *Tools/Options/Communication*).

If there is still no answer from the controller, it will flag this as a communication error and jump to the next controller.

The system will declare a communication problem if a controller does not answer to polling during a pre-defined 'Polling error time-out' delay.

The 'polling error time-out' delay (30 seconds by default) is adjustable in *Tools/Options/Communication*

Waiting delay (in milliseconds)

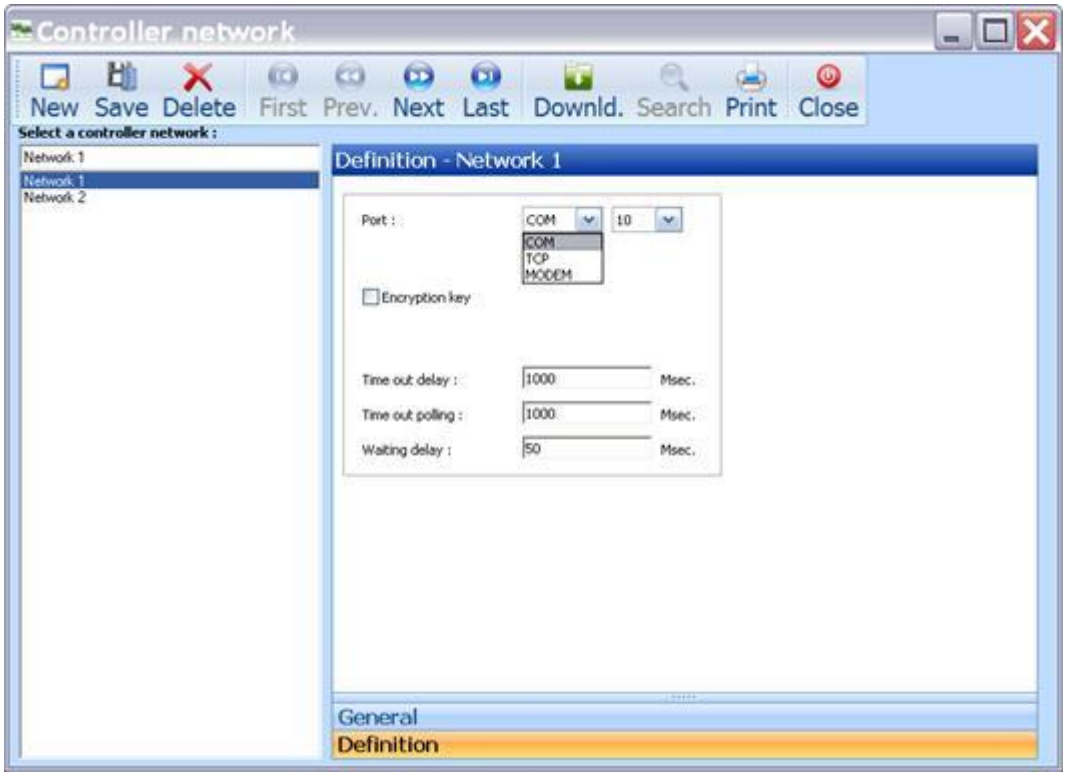
(Default 500 msec – keep this value unless specified otherwise)

Specifies the delay between two communication operations between the system and the controllers (polling or commands) - measured in milliseconds. This function will help slow down the system so as to free up the system PC.

Note on Baud Rate: The communication baud rate between controllers and the system is defined in *Tools/Options/Communication*

3.2.1.2 NETWORK/DEFINITION - LOCAL COMMS PORT

This screen defines a Communications Network connected via a PC Port (COM 1, . . .n).



In the screen example, the pull-down shows the Network type as 'COM'.

Port

Select 'COM' and choose a COM port number, from 01 to 99

PC Port per COM Network

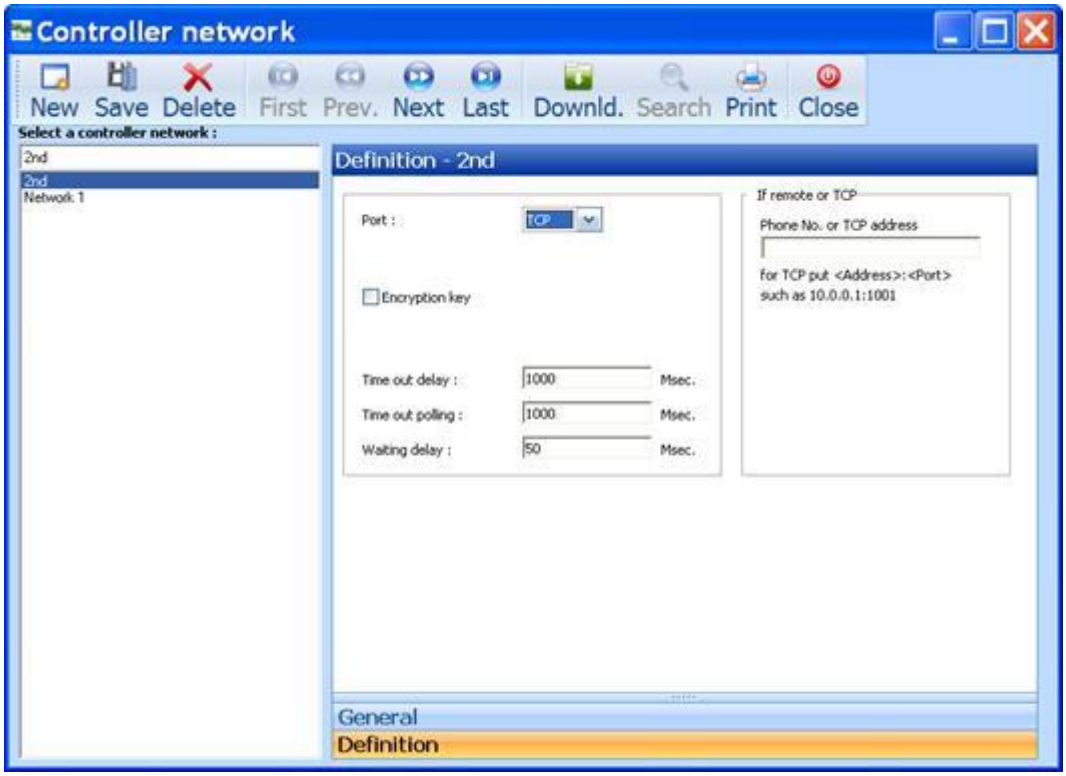
Each network defined as type 'COM' must have a separate corresponding port on the PC.

Encryption Key and Comm. Parameters

See *Encryption Key and Communication Parameters*

3.2.1.3 NETWORK/DEFINITION - TCP COMMS PORT

This screen defines a Communications Network connected via a TCP network.



Port

Select 'TCP'

Encryption Key and Comm. Parameters

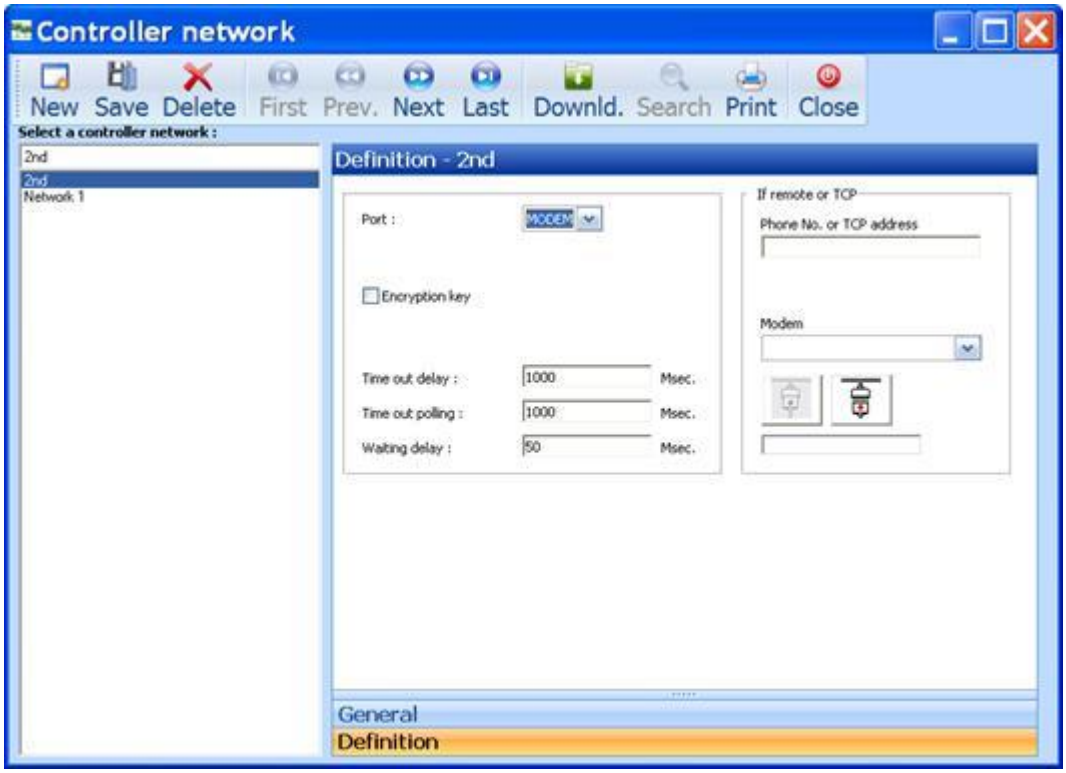
See *Encryption Key and Communication Parameters*

Phone no. or TCP address

Specify the TCP address requested in the format '<Address>:<Port>'
Example: 192.168.168.49:1001

3.2.1.4 NETWORK/DEFINITION – MODEM COMMS PORT

This screen defines a Communications Network connected via Modem.



Port

Select 'Modem'

Encryption Key and Comm. Parameters

See *Encryption Key and Communication Parameters*

If Remote or TCP

Phone No. or TCP address

Enter the Phone number that the remote modem will be using

Modem

Pull-down to select a modem
(the list corresponds to the modem drivers installed on the PC)

- Set modem to auto-answer
- Configure modem to match Controller settings
- Click Connect button

See *Updating Remote Controllers* for further info

Connect/Disconnect buttons

Note: These icons are enabled only after the definition of a new network controller has been saved

- **Connect button** - Initiates the modem connect sequence.
  The status will be shown - ('Proceeding', 'Line Busy', 'Connected')
- **Disconnect button** - Takes the controller off-line.
  Relevant database changes will be saved until the next time the controller is connected.

Notes:

1. Default values for communication parameters are set in *Tools/Options/Communications*.
2. See notes below for *Updating Remote Controllers* .

3.2.1.5 UPDATING REMOTE (DIAL-UP) CONTROLLERS VIA THE MODEM

When remote controllers are connected to the PC through a communication port defined as 'Modem' (in the 'port' field of the Controller Network/Definition Tab), and the user makes changes to the database, dial-up Controllers can be updated in three ways:

Update Controllers Manually

Open the definition in *Controller Network* and click 'Connect'. Once the controller is online, all the 'pending' commands are downloaded automatically, and all events stored in the controller are uploaded.

Update Controllers by User-defined schedule

1. Define a new action and select the type:
   "Connect distant network and read transactions".
2. Select the relevant remote controller network.
3. Save.
4. Click "Make it a process".
5. Define a new global reflex.
6. Select the type "Scheduler" and select the relevant time and dates. For example: Any day, any month, at 23:00.
7. Select the newly created process.
8. Save.

This will make the system dial up to that modem automatically every night at 23:00, download the pending commands, upload the events stored in the controller memory, and disconnect.

Update Controllers by Automatic Dial-up

When a local controller does not answer to controller commands, (usually due to a communication problem), these commands are left as pendings in the buffer of the controller, and are cleared as soon as communication is restored.

For remote controllers, the system can automatically connect to update pendings on a regular basis, by setting the "Distant connect on pending" option in the *Tools/Options/Communication*. The default delay between retries is 30 minutes, and this can be changed (down to a minimum of 1 minute) using the 'Resend pending every…' parameter. Note: When this option is activated, the Application does not dial up all remote controllers every pending updates period, but only those that have to be updated with database changes. Therefore, if a particular controller does not have to be updated, the Application will not connect to it and would not empty its buffer.

3.2.2 CONTROLLER BUS 2 - OPTIONAL

Controllers communicate with the central PC through their serial Port 1 or their TCP network.

Some controllers are equipped with an optional second serial port 2 (RS485). Such controllers may be connected to the PC through their Port2, via a serial bus called **BUS 2**.

This BUS 2 provides an alternate routing for the network traffic in the 3 following cases: '**Redundant bus**', '**Alarm Priority**', and '**Network reflex bus**'.

Details about setting up the secondary bus are defined in the *Controller Bus 2 - Optional*.

REDUNDANT BUS:

The Redundant Bus provides a backup communication bus for the controller in case of main communication bus failure (for example if the TCP/IP network fails).

If this option is set, then when the Application detects a communication error with one or more controllers of the network, it swaps the communication of all the controllers of that network to 'Bus 2'. This change is done after the 'Communication error time out' delay, (defined in the *Tools/Options/Communications* screen, default=30 sec).

Communication then continues on the secondary bus. However, within a maximum of 5 minutes, the Application will test the main bus. If all controllers answer, the main bus is automatically restored; otherwise, communication will continue on the 'Bus 2' for another period of 5 minutes and so on.

ALARM PRIORITY BUS:

Bus dedicated to giving Alarm messages a high priority, i.e. the alarm messages are sent by the controller via Bus 2 as soon as they occur. The Alarm Priority Bus is typically used for the following:

- Giving Alarm transactions priority
- Large installations with many controllers

Using the secondary bus as an Alarm Priority bus means that while **cardholder transactions** continue to be transferred to the PC **in a 'polling' mode** through Bus 1 (either serial or TCP) connected to the controller communication port 1, **alarm events** are transferred to the PC **in an 'event' mode** through serial Bus 2 connected to the controller's secondary communication port 2.

When controller/s are configured to use an Alarm Priority Bus, the controller ACTIVELY sends all the alarm events immediately as they occur, without waiting to be 'polled' by the PC. This is called Event Mode. Therefore, the user receives alarm messages as they happen, even though the controller buffer may be still loaded with thousands of access, and other, events.

NETWORK REFLEX BUS:

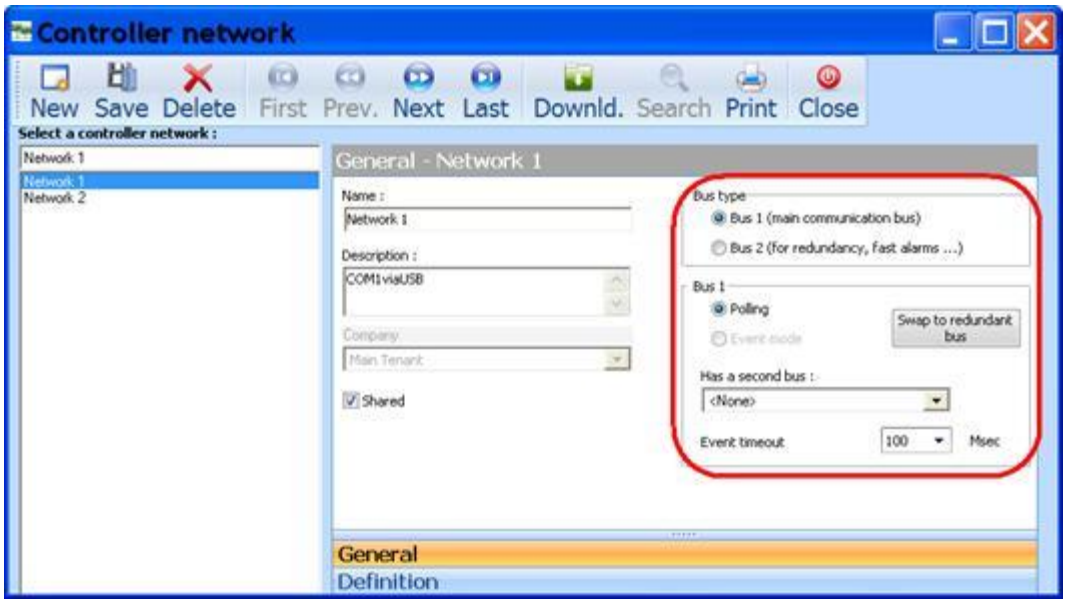
A reflex is the execution of a pre-defined action (relay activation, arming/disarming alarm zones, etc.,) triggered by a pre-defined event (Input under alarm, card transaction, etc.)

A Network reflex is a reflex which can be executed between controllers on the same network, i.e. connected to a same BUS 2, where an event on a specific controller may trigger an action on another controller, independently of a PC (even when the PC is not running).

(Note that Network reflexes are defined in the *Event handling/Global Reflex/General* screen.

PROGRAMMING BUS 2

Pressing Shift + F12 while in the General tab of the *Controller Network* screen accesses the additional fields needed for defining a secondary bus for the network:



Bus type

Radio button selects Bus 1 or Bus 2

- Bus 1 is the default main communication bus connected to port 1 of the Controller.
- Bus 2 is the bus connected to port 2 of the Controller

BUS 1:

This bus operates only in Polling Mode i.e. the PC continuously polls the controllers, in order to check if there are any new events to be reported.
The Event Mode is not available.

Swap to redundant bus (or to 'Main' bus)

When Bus 2 has been defined as 'Redundant', the application automatically swaps to this secondary bus if the communication from the main bus fails.
Clicking on this button allows the user to toggle between Bus 1 and Bus 2 manually (for test purposes).

Has a second bus

This field allows a secondary bus (which has been previously created) to be attached to the main bus 1.

Event Timeout

This timeout is the delay the controller waits to receive acknowledgment of a message it has sent on Bus 2. This message may be an alarm event sent to the PC (in the case that Bus 2 is used as an Alarm priority bus) or a reflex execution sent to another controller (in the case that Bus 2 is used as a Network Reflex bus)
If, after 3 trials, the controller doesn't receive the acknowledgement, in the case of an alarm event it records the alarm in its Event buffer and in the case of a Network reflex it records a corresponding alarm message in its buffer. This will be read later on during a regular polling on bus 1.

BUS 2:

Check the relevant box to define which function the secondary bus will perform: 'Redundant bus', 'Alarm Priority', 'Network reflex bus'. Only one option box should be checked.

Caution:

- Alarm Priority Bus over TCP/IP

When the Alarm Priority bus is connected over TCP/IP, the Connection Timeout must be disabled.
If this is not done, TCP socket will be automatically closed after 5 minutes without an alarm message.
(in the Tibbo DS-Manager application, set "Connection timeout = 0")

Checklist: Before setting/testing Bus 2, make sure that:

- There is RS485 wiring on Bus 2.
- The bus is connected to the secondary serial port of all the controllers equipped with a second RS485 communication port.
- Bus 1 is linked in the software to Bus 2 (i.e., in Bus 1 definition, the '**Has a second bus**' field has been set).

In the *Controller/General* screen, the network of all the corresponding controllers is Bus 1.

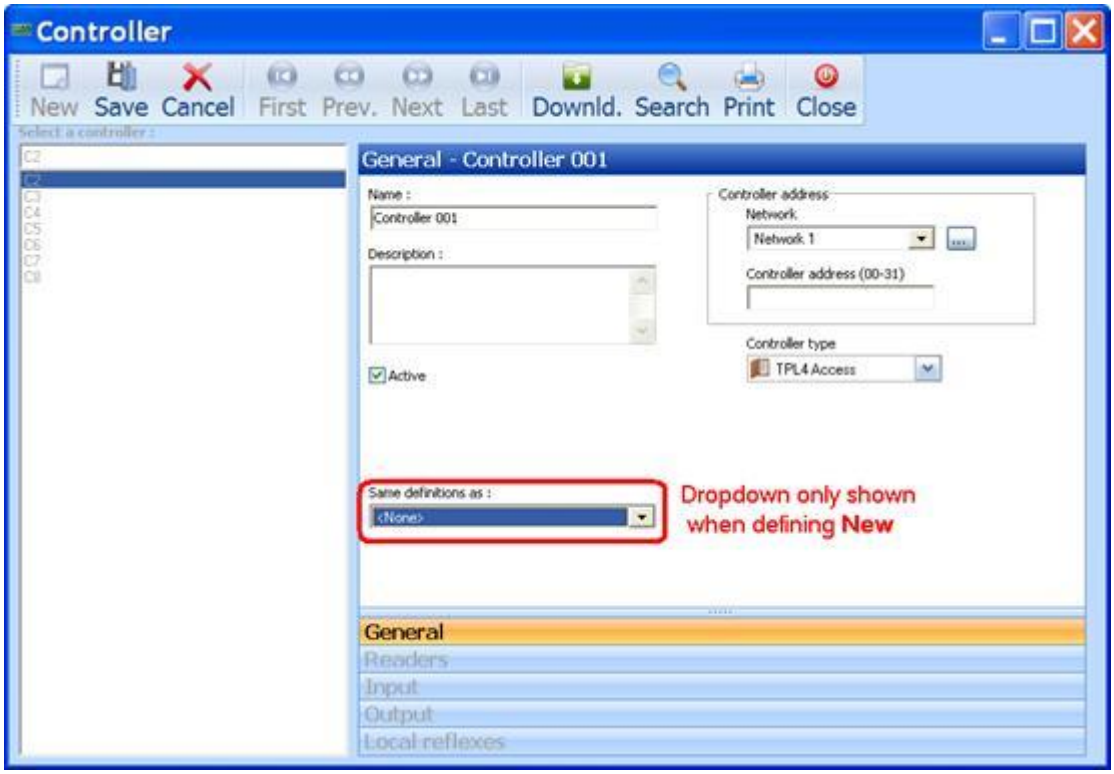
3.3 CONTROLLER

These menu and sub-menu screens allow definition of the controller's parameters in the system.

Related Links	
Main Topic	Controller/General
Tabs	Readers/General
	Controller/Input
	Controller/Output
	Controller/Local Reflexes
Add. Info	Controllers
	Controller Types
	Default Connections for Inputs, Relays and RTX
	Controller Capacity

3.3.1 CONTROLLER/GENERAL

This screen allows definition of the controller's parameters in the system.



Name

<Controller 001>, <Controller 002>, . . are default names and these may be modified by the user.

Useful Note: Use of logical names allows the user to recognize which controller is referred to.

e.g. 'FrontEntrance01', 'FrontEntrance02' etc.

Description

Free text

Active

Check to activate communication

Uncheck to set offline

Same Definition as :

This dropdown appears only when **New** is pressed. It allows a new Controller to be defined using the same settings and parameters as a currently-defined controller.

Network

Select an existing network from a list of previously defined networks or create a new network by clicking on the […] button.

Controller Address (00-31)

Enter the physical address of the controller as set on the controller Address Selection DIP switches.

Controller Type

Select correct type from the list of *Controller Types*.

Parking

(This box is only displayed if the selected Controller Type includes the description 'Parking')
Use dropdown to select the Parking Lot to be associated with this Controller.
Parking lots must be previously created via the *Parking Lot* screen.
[...] opens the Parking Lot screen to allow a new Parking lot to be defined.

Notes:

1. **Saving and downloading**
   When saving the data entered (Save or F3), automatically downloads any relevant data from the new information entered. If the controller has just been created, a complete download will be performed, which includes: initialization data, update of time and transfer group parameters, daily and weekly programs for access, reader parameters, card format and cardholders database (with access authorizations).
2. **Updating**
   Once a controller type has been selected and the entry saved, the controller type may not be changed. To change the type, you must delete the controller and make a new one.
3. **TPL4 Lift & TPL4 D4 Lift**
   A single controller can pilot several lifts independently.

3.3.2 READERS

These menu and sub-menu screens allow definition of the Reader's parameters in the system.

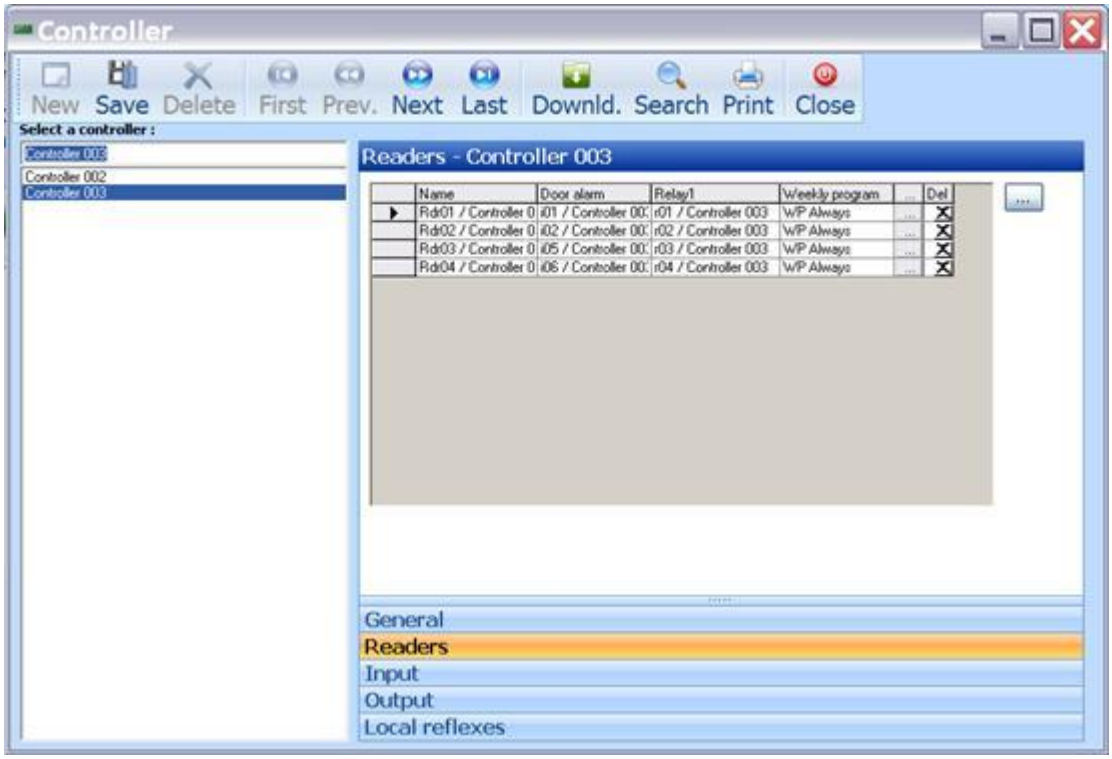
Related Links	
Main Topic	Readers General Tab
Tabs	Readers Door Control Tab
	Readers Access Mode Tab
	Readers Miscellaneous/Badge Format Tab
	Readers Fingerprint Tab (only shown if this is a Bio reader)

READER LIST

Selecting the Reader Tab displays a List window, from which a reader can be selected.

The List window shows all readers defined for the selected controller. Default parameters are defined according to the type of controller.

Click on the **[...]** symbol of the required reader in this screen to open the General tab screen for that reader.



Reader Tab

Readers - <Controller n>

A table of all the readers of the selected Controller is displayed, showing Reader name, Door alarm (the alarm that signals opening of this door), Relay1 name, and the assigned weekly programme

➢

Use Up and down arrows to select a Reader

[...]

Click to open the *Readers/General* screen for the selected reader

✖

Click to delete the selected Reader

[...]

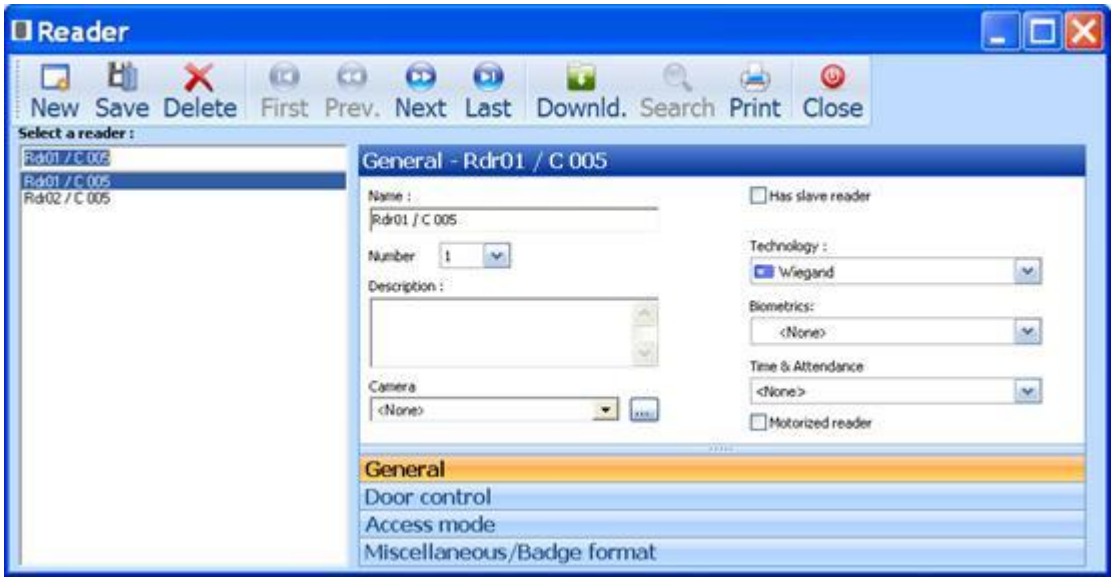
(Outside the list table) – Click here to access the *Readers/General* screen returning to the top of the list.

Note If an **alarm controller** (such as 'DS200' or 'TPL4 Alarm') is selected, the system displays the message:

```
Alarm monitoring controller without readers !
```

3.3.2.1 READERS/GENERAL

This screen allows the user to assign a name and description to the selected reader and define basic characteristics.



Name

Reader name – free text

Useful Note: Use of logical names allows the user to recognize which reader is referred to. e.g., 'Front Entrance Main Street', 'Main Entrance Production hall', etc**.** The abbreviation 'Rdr' is used in default names to show the difference between Readers and Relays (Rdr01, Rdr02 . ., rather than r01, r02 . .)

Number

Dropdown shows available readers defined for that controller

Description

Free text

Camera

Note: only for use with Video Module.
Select Camera from list if associated with this door.
If not defined yet, click [...] to open Camera screen

Has Slave Reader

Check this box if this reader is to access at a door and is to have a 'slave' reader attached that controls movement in the opposite direction at the same door. (Standard 4-reader controllers (**TPL4**, **TPL4 Din Rail**, or **Mega 4**) typically control one or two primary readers (default names rdr1 and rdr2), with each reader controlling one door. Each of these doors may in turn have a secondary reader installed so that exits also require a card to be passed. These are called **slave** readers.)

Slave readers use the same settings as the primary readers. When the 'slave' box is checked, then a name must be entered for the slave reader, so that transactions in the log can indicate that the secondary reader was used.
When Anti-Passback is in force for the readers, then slave readers are automatically configured to have the reverse areas from their 'host' reader.
Note: In order to control 4 **separate** doors, the controller models must be **TPL4 D4**, **TPL4 D4 Din Rail**, or **Mega 4 D4**. These are physically the same controllers, but have different ROMs. Definitions of readers on these controllers will show 4 readers, with default names rdr1, rdr2, rdr3, and rdr4.

Technology

Default technology as selected in *Tools/Options/General* screen will be shown.
Dropdown can be used to select a different technology.

Caution: If the technology specified for a reader (in the screen) is changed, the system will automatically change ALL other readers on the same controller to the new technology. The database of cards on that controller will be deleted and a new database holding only cardholders with the new technology will be downloaded. Care should be taken before making such a change as this can result in the downloading of a large number of records, creating a substantial load on the network to which the controller is attached.

Biometrics

If a Biometric technology reader is selected, choose the required biometric from the dropdown.
The Fingerprint Tab is only displayed if the selected reader has biometric capability

Time and Attendance

According to the T&A variation in use, select as follows:

- **Standard T&A option 1 -**
  Select **'none'**. (The 'Standard T&A Option 1' system report uses only the first and the last transaction of the day, from any reader)
- **Standard T&A option 2 -**
  Select **'Entrance reader'** if working time calculation will start from this reader
  Select **'Exit Reader'** if working time calculation will stop at this reader.
- **T+ Module -** Select **'Entrance Reader/Exit Reader'** if the reader is to be used for reporting T&A transactions.

See *Time and Attendance Concepts*

Motorized reader

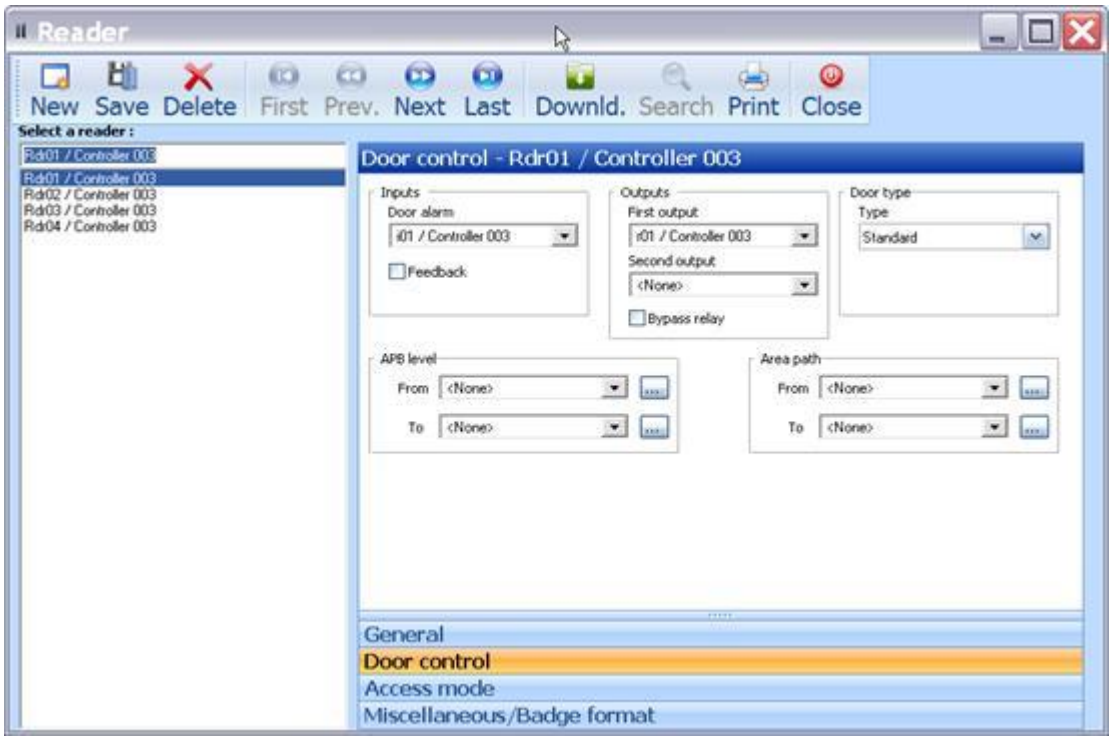
Check box if motorized reader attached
To use the DDS magnetic motorized readers, select the 'Motorized Reader' technology in this screen. Two additional fields are displayed:

- Select the controller input connected to the badge detection signal (S1)
- Select the controller relay to which the Common is connected to the signal (MFC/MRC) that controls the sense of the reader motor.

3.3.2.2 READERS DOOR CONTROL TAB

This screen defines which Controller Inputs and Outputs are used for door sensors, controls, and alarms, defines the type of doors installed and specifies the APB levels and Area before and after a badge is passed at the Reader.

For the default setup of doors and relays, see *Default Connections for Inputs, Relays and RTX*



Inputs

Door Alarm

Select the controller input to which the door opening control device ('door contacts') is wired; an alarm is set off when a door is forced or stays open beyond a predefined delay ('door alarm relay') – see *Reader/Access Mode* screen

Feedback

Check the box in order to verify the physical entry or exit of a cardholder that has been granted access (i.e. that after reading a badge and granting access, that the door actually opened)

Operation mode: A cardholder swipes a badge at a reader. The controller authorizes access to the cardholder by activating a door relay. During the predefined 'door open' time, during which the door can be opened, the controller goes into a waiting mode.

- If the door has been opened and closed, as sensed by activation of the 'door opening control device', the cardholder is assumed to have passed and the controller records the access transaction in memory.
- If the door is not opened, the 'door opening control device' is not activated and the controller records the transaction "access refused" in memory.

Outputs

Two relays ('first and second outputs') may be activated when access is granted to open doors, gates, etc. Select them from the list of relays defined on this controller. They are activated during the 'Door open time' delay.
See *Reader/Access mode* screen

Bypass relay

When this check box is selected, then when access is granted, the second relay is activated for the duration of the 'Door alarm delay' and not for the 'Door open time' – (See *Reader/Access mode* screen). It is automatically deactivated when the door is closed.
Typically used where an authorized employee must enter to switch off an alarm panel, etc. A 'bypass' relay is connected to inhibit the Door Alarm input of the Alarm Panel during the programmed door alarm delay.

(Requires firmware dated 16/03/09 and later).

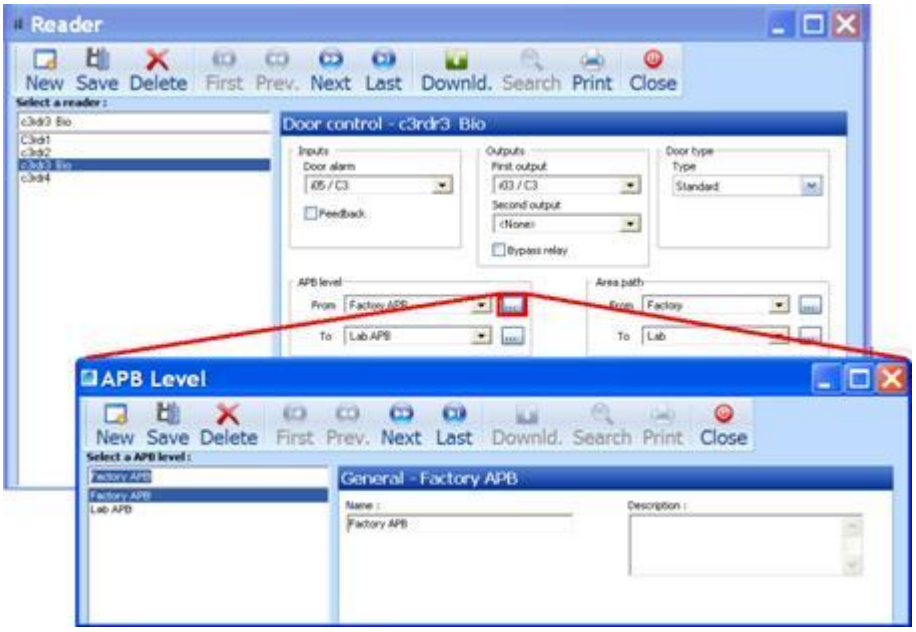
Door type

Select from list:

- **Standard**: Access is granted if badge is authorized
- **Controlled by Input**: This specifies that the door is controlled by the status of the input specified in the 'Controlled by' field. The door opens if that input is inactive but remains closed if it is active. (If, for example, the input selected is the door contact of a second door, the 'controlled' door will be opened only if this second door is closed)
- **Man Trap 1, 3, 4**: Select if the doors operate in man trap mode, i.e. passage through two consecutive doors is required in order to access a site.
  See *Mantraps Concept*
- **Manually Controlled**: Access is manually regulated

APB Level

APB levels (Anti-Passback levels) divide the site into 'levels' which are geographic zones delimited by readers. The system may control the movement of people so that they have to follow a specific path, i.e. pass between specific levels in a defined way: when the Global anti-Passback function is set (see *Reader/Access Mode* screen), the 'From' level is the level in which a cardholder must be before accessing the reader, and the 'To' level is the level he will be in after being granted access at this reader. Therefore, APB levels enforce the movement of cardholders in an authorized sequence, and may also prevent the same badge being used at a same level (at an entrance, for example) by two people.
See *Anti-Passback – Concept and Examples*
These levels are defined in the special screen **APB level**, which is opened directly from this screen, by pressing the […] button after From or To in this part of the screen.


Reader
New Save Delete First Prev. Next Last Downld. Search Print Close
Door control - c3rdr3 Bio
APB Level
General - Factory APB

From

Select the APB level where the cardholder who requests the access must be, or <none>, from dropdown

Use [...] to define a new APB level

To

Select the APB level that describes where the cardholder will be after passing a badge at this reader or <none> from dropdown

Use [...] to define a new APB level

Area Path

Area Paths divide the site into 'areas' and allow the system to determine the number of people currently inside a named 'area' – Areas can be defined for the whole site, building/s (or floor/s of a building), and/or a particular room or rooms.

Areas are set up in the *Area* screen.

From

Select the Area that describes the area that the reader is in or <none> from dropdown.

Use [...] to define a new Area

To

Select the Area that describes the Area where the cardholder will be after passing a badge at this reader

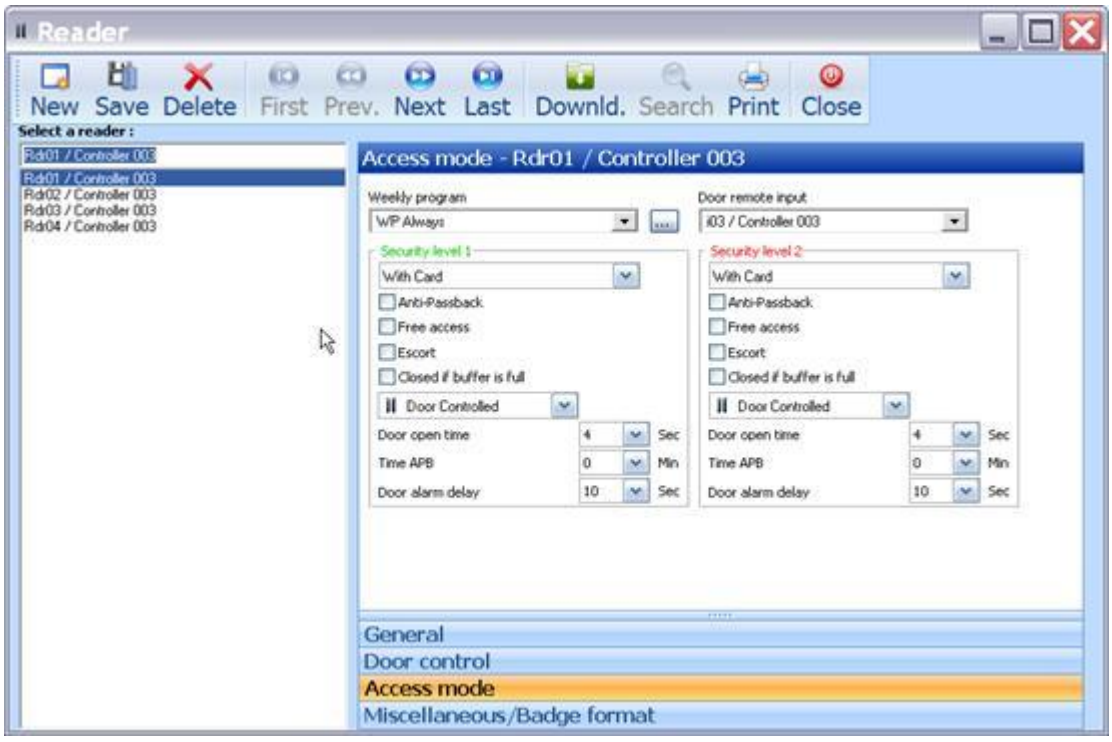
3.3.2.3 READERS ACCESS MODE TAB

Every reader has two sets of settings – 'Security level 1' and 'Security level 2', allowing different access controls to be applied when reading a badge.

The current Daily Programme for each reader (set up in the Weekly Programme associated with it) divides the day into 2 segments:

- 'Time Zone 1' - (**green** time)
  – during this time, the reader uses the rules of 'Security level 1'
- 'Time Zone 2' - (**red** time)
  – during this time, the reader uses the rules of 'Security level 2'
  (see *Weekly and Daily Programmes, Time Zones*)

Note: Maximum number of usable programmes
Many daily, weekly and holiday programmes can be created in the whole system. However, **each controller** may only include a restricted number of programmes. See *Controller Memory Capacity*. An error message appears if the limit of programmes has been exceeded for a specific controller.



Weekly Programme

Use the dropdown to select a Weekly Programme for the reader, or the [...] field to create a new *Weekly programme* or modify an existing one.
The reader automatically selects its current 'Security Level' based on the Time Zone set in the Weekly Programme associated with it.
The default Weekly Program for all readers is 'WP Always' and therefore a reader will operate in 'Security level 1' unless another Weekly Programme is selected

Door remote input

Select the controller input to which the Request to Exit button (RTX) is connected.
See *Default Connections for Inputs, Relays and RTX*

Note that when an RTX input is associated with an Event Weekly Program (via the 'Event Handling Programme/Alarms' screen), the button is active and raises an alarm during

the '**green**' periods of the Weekly Programme but doesn't open the door (and doesn't raise an alarm) during the '**red**' periods of the programme.

Security Levels 1 & 2

Define the access rules applicable to the two states of the Weekly Programme.

These parameters must be filled out separately for **both** Security Levels 1 & 2

Security level 1 – Green time**:**

Rules to apply during Time Zone 1 of the applicable Daily programme

Security level 2 – **Red time**:

Rules to apply during Time Zone 2 of the applicable Daily programme

Parameters for Security Level 1 & 2

Access authorization: Define the way in which the authorization access must be initiated:

- With Card (normal card read)
- With Keypad (just enter PIN at Keypad (Personal Identification Number)
- With Card OR Keypad
- With Card AND Keypad

Note: If the .ini entry *DisplayandSaveOnlyGrantWithPIN*=1 is set, the Application will **only** show and save Grant events where **both** badge and PIN were used to grant access.

Anti-Passback

Check this box if APB is to be applied at this reader

The Anti-Passback feature is used to stop a card from being used for successive entries without a valid exit, or vice-versa. The system distinguishes between 4 types of Anti-Passback:

Local Anti-Passback: This function is managed by the controller itself and prevents the cardholder from passing his card twice in a same reader. To activate it, check the Anti-Passback box and leave the fields '**From**' and '**To**' of the 'APB level' **empty** in the *Reader/Door Control* screen.

See *Local Anti-Passback*

Timed Anti-Passback: Also called "lock out delay" - prevents a card from granting access twice at a same reader within in a pre-defined time. A second access will only be authorized after the lockout delay. Enter the required lockout delay time in the 'Time APB' field (between 1 and 15 minutes). If the Local Anti-Passback feature is also to be activated, check the **Anti-Passback** box.

See *Timed Anti-Passback*

Global Anti-Passback: Requires from the cardholders to follow a pre-defined path into the facility, i.e. may pass only from a pre-defined level to another one as follows: The site is divided into **APB levels** and each reader checks that the cardholder's current APB level corresponds to the reader's 'From' APB level, before allowing the transaction and updating the cardholder's current location to the 'To' APB level of the reader.

To activate Global Anti-Passback, check the **Anti-Passback** box and fill the fields 'From' and 'To' with the previous level and the next level as required, in the **APB level** section of the *Reader/Door Control* screen.

See *Global Anti-Passback*

Soft Anti-PassBack: Allows an access transaction that would normally be prevented by the Anti-Passback rules, but merely reports it, rather than actually preventing the access.

To activate it, first select in the Tools/Options/Server" screen, the 'Soft anti pass back" box. Then, in the Reader/Access mode screen, check the "Anti-Passback" box – this will then show the "Soft" option. Checking the "Anti-Passback" box applies Soft Anti-Passback to that reader.

See *Soft Anti-Passback*

Caution: When Soft Anti-Passback is selected – it applies at ALL times when the Anti-Passback works, i.e., it is not possible to have full Anti-PassBack on green periods and Soft Anti-Passback on red periods or vice versa.

Notes:

1. **Checking APB transactions**: When using APB, it is recommended that the Feedback option in the *Reader/Door Control* screen be switched on, to be sure that the cardholder has physically passed the door before applying the APB.
2. **Re-initializing APB**: The Anti-Passback feature may re-initialized at any time from the *All cardholders/Location* screen.
   It may be cancelled for specific cardholders by selecting the 'No APB, No timed Anti-Passback' box in the *All cardholders/Personal* screen.

Free Access

Check to set this reader to provide unlimited access for any valid cardholder without checking their validation date or their access group.

Example: This setting could be used when all employees must be temporarily allowed access at this reader, such as access to a normally-restricted area for a Company event, etc.

Escort

Checking this box requires that anyone passing their card at this reader have their transaction validated by a second cardholder. The second badge must be presented within the time set in the 'Door open time' parameter (4 secs default). (The second cardholder is noted in the log as having accompanied the first, but does NOT get their own transaction)

Basic requirement – Regular cardholders: When this box is checked, then for any cardholder who has valid settings to be accepted at this reader, the reader will still require that another cardholder (who is also valid here) passes their card to validate the transaction.

In the Log screen, the transaction will be displayed as follows

06-07-10 13:49:39 Access Granted 'Solomon Reginald {Bosston Donanld}' From reader 'C3rdr1'
Cardholder Transaction shows name of escort

(The second cardholder is noted in the log as having accompanied the first, but does NOT register a separate transaction)

Additional optional requirement - Cardholders who are registered as 'Need escort': If the first cardholder has 'Need escort' checked in their cardholder record (*Cardholder/Personal* screen), then the second cardholder must have '**Supervisor**' status ('Supervisor' checked in *Cardholders/Personal* screen)

Override – Even where the Escort box is checked at a particular reader, the requirement is overridden if the cardholder requesting the transaction has BOTH 'Supervisor' AND 'Need escort' in their *Cardholders/Personal* screen

Close if buffer is full

Select this function to refuse access when the corresponding transaction cannot be registered in the system Event Buffer, because it is full. It must then be read form the PC and erased to allow accesses.

If this option is not selected, access is granted even if the buffer is full. The buffer then operates as a 'FIFO' buffer, i.e. the oldest transactions are erased in order to make space for the newer ones.

Door status

A door can be set to three different states:

- **Door controlled** – Standard access mode, access depends on badge and authorizations
- **Door closed** – door is closed and no access permitted while in this state, regardless of badge and authorizations
- **Door open** – door is open, access control not in force

Door open time

(0-120 secs) Time during which cardholder may pass through after receiving authorization. Corresponds to activation delay of the relays that control the door. Note – Alternated Mode – By setting the time to 122 secs, the door will be set to a mode where it will stay open after a valid badge is read, and only close when a second valid badge reading is completed and so on.

Time APB

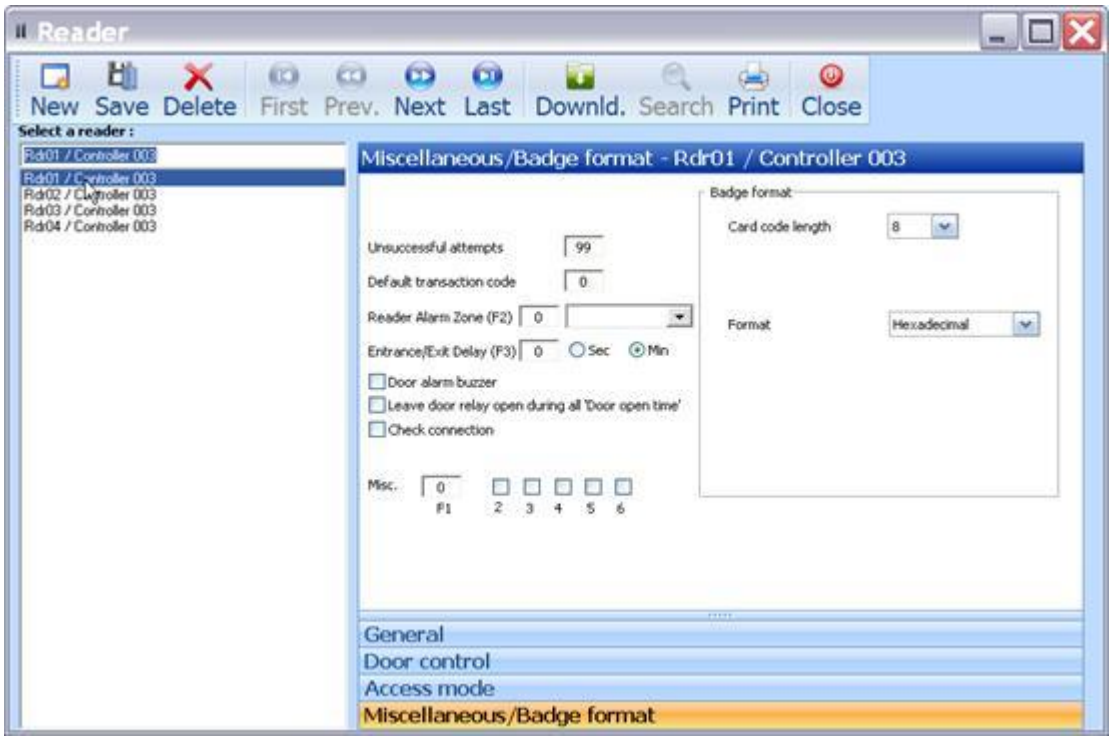
Delay before the same person can use the door for a second time. See *Anti-Passback*

Door alarm delay

(0-75 secs, to nearest 5 secs) - Delay during which the door must be closed.
If the door is still open after this delay, a 'Door left open' alarm is raised.

3.3.2.4 READERS MISCELLANEOUS/BADGE FORMAT TAB

This screen allows the user to define a number of additional parameters for the reader.



Unsuccessful attempts

Specify the number of successive unsuccessful attempts allowed by the system before an alarm is raised (00-99)

Default Transaction code

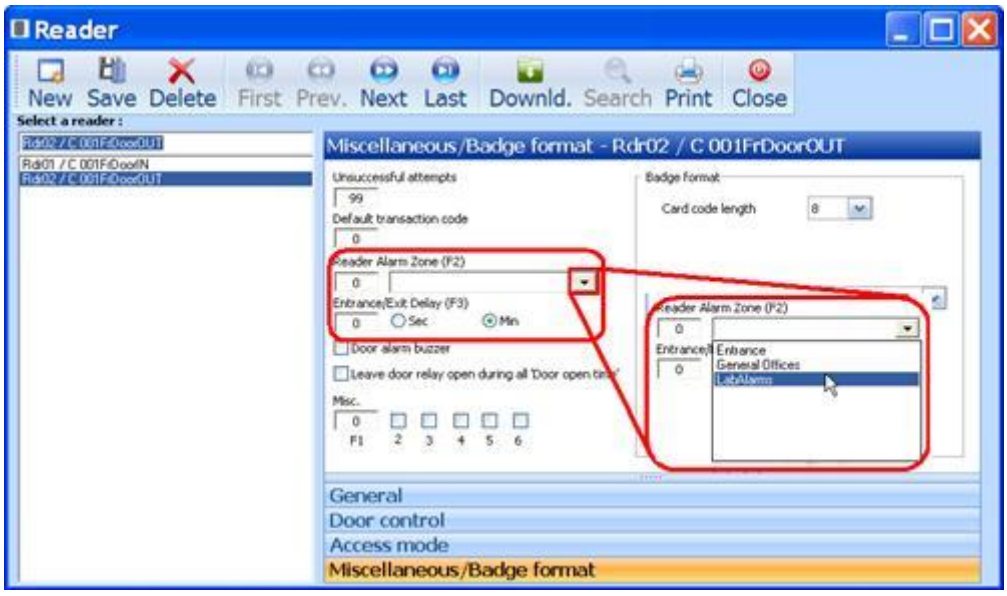
Specify the transaction code sent by the controller to the PC when an access is granted; See *Convention for Reader Transaction Codes*
If the reader is equipped with a keypad, the user can modify this default code.
Transaction codes are used for the following functions:

- T+module T&A transactions: The system will associate a Work Category to the Transaction code the T&A calculation (See T&A module)
- Pre-defined action(s) may be triggered by the system upon reception of specific transaction codes. (See *Global Reflex*)
- Readers with special Supervisor functions

Reader Alarm Zone (F2)

This field may have two functions:

- Associate an **Alarm Zone** (or Input Group) with the reader.
  (An Alarm zone or Input Group is a group of alarm inputs linked together, see *Event Handling/Input Group* screen)
  If a Reader Alarm Zone is defined, then access through the associated reader is denied when the selected Alarm Zone is armed, excepting for Supervisors.
- Alternatively, this field may be used for readers equipped with a keypad:
  This code is sent when access is granted and the [F2] function key is used.



Reader Alarm Zones

Once Input Groups/Alarm Zones have been defined, specific Readers can then be associated with particular Alarm Zones. Such Readers will then be deactivated during times when the Alarm Zone is armed. This means that access will not be granted to enter an armed Alarm Zone.
The Reader Alarm Zone area has a dropdown that displays all Alarm Zone names. Clicking on an Alarm Zone name will associate the reader with that zone, and the reader will be activated for normal access transactions when the Alarm Zone is disarmed, and deactivated when the Alarm Zone is armed.
(However, if a cardholder who is designated as a Supervisor passes their badge at such a reader, they may be granted access and the alarm will not be set to Alarm_ON for the time defined in the **Entrance/Exit delay** field of the *Reader/Miscellaneous/Badge Format* screen.)

The number to the left of the name is the **Input Group Index** assigned to that Alarm Zone. The number is not editable, but to remove the association of the reader with an Alarm Zone, select the **Input Group Index** with the mouse/cursor, and click the Del key.
The **Input Group Index** may also be seen in the *Input Group* screen by selecting the Input Group and clicking Shift-F12.

Entrance/Exit delay (F3)

This field may have two functions:

Define an entrance or exit delay:

- **Entrance delay**: When a cardholder who is designated as a Supervisor reads his badge at a reader associated with an Alarm Zone, and if the Alarm Zone is armed, access is granted and the Alarm Zone will be temporarily disarmed for this delay. This provides a grace time to allow the supervisor to access and to disarm the zone.
- **Exit delay:** With a reader equipped with a keypad, a supervisor may arm the Alarm Zone associated with the reader by typing the code 26nn# (where nn is the Alarm Zone number) and then reading his badge at this reader. The reader Alarm Zone will only be armed after this delay, to give him time to leave the zone.

Send code when F3 is used (for readers with keypads)

This code is sent when access is granted and the [F3] function key is used.

Door alarm buzzer

Check this box if the reader buzzer is to be activated if the door either opened without authorization or if it remains open too long after a valid pass.

Note:

- If the door is opened without authorization, the buzzer is activated immediately and a door alarm is raised.
- If the door is opened after a valid pass and then remains open, the buzzer sounds an interrupted 'beep beep' when 75% of the 'door alarm delay' has passed, warning that a door alarm is going to be raised. When the remaining time is over, a continuous 'beep' is sounded, indicating that a door alarm has been raised.

In either case, the buzzer stops when the door is closed.

Leave door relay open during all 'Door open time'

In the Default setting (i.e. when this box is NOT checked), the controller deactivates the door relay as soon as it detects that the door has been opened (through the door sensor).
Checking this option will leave the relay activated during the 'Door open time'.

Check connection*

To enable automatic report transaction if reader disconnected
(* Only supported on Mega and TPL-DR controllers)

Misc/F1

This field may have two functions:
1- Attribute a specific transaction code to the keypad function keys [F1] (if the reader is equipped with a keypad).
This code is sent when access is granted and the [F1] function key is used.
2- Reserved for special projects

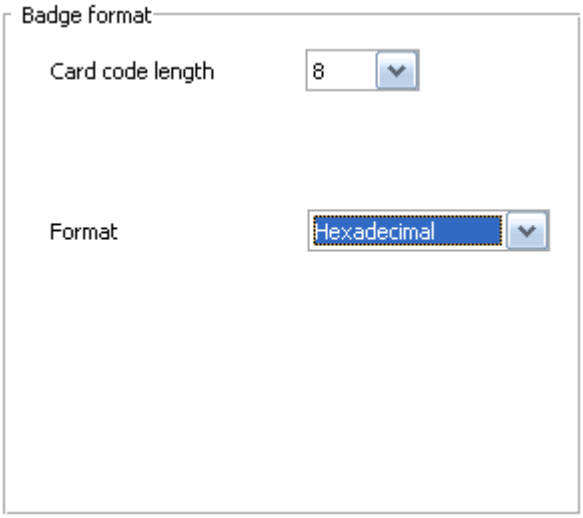
Checkboxes 2, 3, 4, 5, 6

Reserved for special projects

Badge Format

These fields allow defining a special badge format within the badge technology set in the *Readers General Tab* screen.
(Note that the badge technology may be set by default for all the system in the *Tools/Options/General* screen)
There are various formats of magnetic, bar code and Wiegand technologies.
The default for the system is to read the first 8 digits of the card code (hexadecimal digits on Wiegand cards and decimal digits for magnetic or barcode cards)
See *Additional Information on Magnetic or Barcode Badges*
The Badge Format fields provide ways to customize the format to suit possible pre-existing badges at a particular installation.

WIEGAND TYPE



Card code length

The 'card code' is a unique code, which identifies the card. By default, the system record the first 8 hexadecimal digits of the card data but this length may be changed to 10 or 12 digits, if the card has more than 8 digits.

Format

The hexadecimal default format consists of reading the 8 (or 10 or 12) first hexadecimal digits of the card data. This format may be changed to other pre-defined formats selected from this dropdown window. The list of the supported formats is constantly updated - see the 'Card Format' document, publication No. 02TE010, for details on the existing formats.

Customer code length and value (for 'Decimal' and 'Decimal 24 bits' format)

For added security, an Access Control user may wish to use custom cards that are coded to indicate their particular company. On such cards, the Customer code (or 'site code') is a supplementary common code which appears on all the cards; It must be specially encoded or ordered from the card supplier.
In Wiegand technology, this code exists only for the 'Decimal' or 'Decimal 24 bits' formats and consists of 3 decimal digits.
If applicable, select 3 in the Customer code length field and enter the code itself in the **Customer code value** field.

Note: The commonly-used formats are as follows:

Hexadecimal: The **card code** is the 8 (or 10 or 12) least-significant hexadecimal digits of the card data. No Customer code is available.

Decimal: The **card code** is the decimal conversion of the 16 least-significant bits (i.e. the first and the second least-significant data bytes).

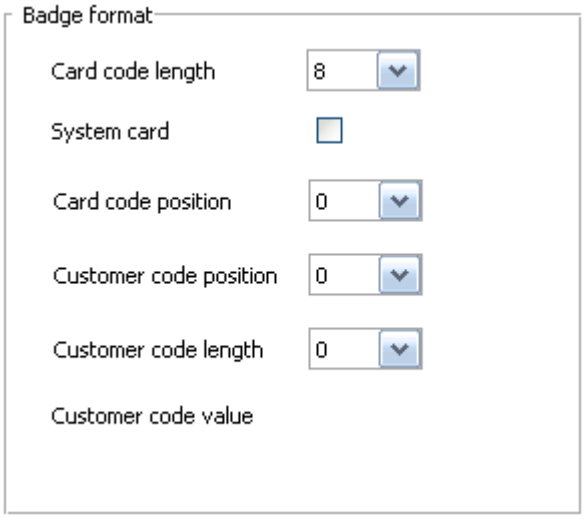
The customer code (or site code), if it exists, is the decimal conversion of the third least-significant data byte
(only 1 byte – i.e. three decimal digits, possible values only 000 - 255)

Decimal 24 bits: The **card code** is the decimal conversion of the 16 Low significant bits (i.e. the first and the second lest-significant card data bytes), preceded by the 3 customer code digits.

The *Customer code* (or site code), if used, is the decimal conversion of the third lest-significant card data byte (therefore providing 3 decimal digits, from 000 to 255).

MAGNETIC OR BARCODE

When THESE technologies are specified, the following fields are shown



Card code length

A bar code or magnetic code may contain many numbers or characters; by default, the first 8 characters of the code are taken as the 'card code' but up to 12 characters may be used.

System card

Not used.

Card code position

By default, the system records the first characters (8 to 12) recorded on the card strip. It is possible however to read a different set of 8 digits by specifying the position of the first one in the "Card Code Position" field (Value between 0 and 37, the default value 0 corresponds to the first encoded character).
Note: Normally, only 0-27 would be valid – i.e. a code of 8 digits starting at position 29 would reach position 37).
See note below on *Additional Information on Magnetic or Barcode Badges*

Customer (or site) code

For added security, an Access Control user may wish to use custom cards that are coded to indicate their particular company. On such cards, the **Customer code** (or

'site code') is a supplementary common code which appears on all the cards; It must be specially encoded or ordered from the card supplier.
By default this option is not used. To use it, fill out the following three fields:

Customer code position

Specify the position of the first character of the code; choose a value between 0 and 37
(0 corresponds to the position of the first number encoded in the badge).

Customer code length

Specify the size of the code to be read; choose a value between 1 and 8.
Note that 0 is the default value, which means that the customer code value is not checked.

Customer code value

Enter the customer code value into the squares that appear on the screen.

Card Issue Reader: This field only shown after pressing Shift+F12

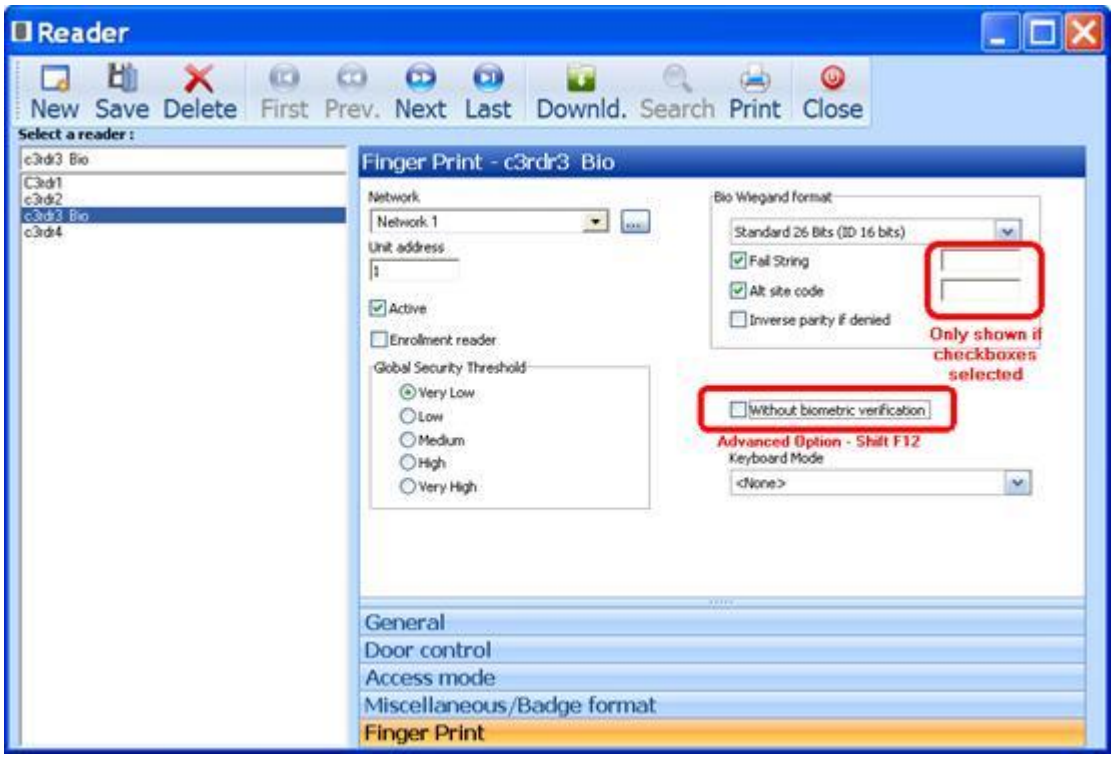
Select this option only if a dedicated reader is used to create new badges. If the reader is in the card issue reader mode, it cannot be used for access control purposes.

Note: If this option is checked, the reader cannot be associated with any inputs or other functions.

3.3.2.5 READERS FINGERPRINT TAB

This screen allows configuration of biometric readers. This tab will NOT be displayed unless the reader has been defined as a biometric reader in the *Readers/General* tab.

Network definition: Bio Readers have two outputs – one (Wiegand) output is connected to the controller (as for all readers), to send the identity of the cardholder in the same way as when a badge is read. The second output is a network connection that is required on Bio readers for transferring information about the fingerprints themselves (i.e. the template information). This second connection is defined in this screen. (Network, Unit address)



Network

Select the Network which application will use for downloading template information to this Biometric Reader.

Note: it is strongly recommended that the selected network is for Bio readers only and not for Controllers

Unit address

Enter the Unit address of the Biometric Reader.
(Normally this address is preset and printed on the back of the reader).

Active

Check this box if the reader is active and can communicate via its network connection. While this box is set to 'inactive' (and saving the setting), the system is instructed not to try to send template updates to this reader.

Enrollment reader

Check this box if the reader also serves for enrolment.
Any Biometric reader can act as an Enrolment reader (for capturing initial Biometric identity) in addition to its normal function as a regular Access reader.

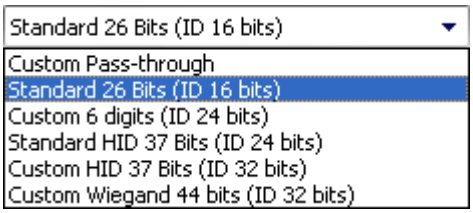
Global Security Threshold

Select **Very Low**, **Low**, **Medium**, **High**, **Very high**
This parameter determines the reader security strictness
(This option is not shown for BioPass and BioSmart readers).

Strictness: This determines how closely the measured information from the current biometric scan must conform to the stored template - i.e. how good a 'match' is required.
Since the verification process always uses the lower of the two security levels ('global' and 'personal template'), a global setting of 'Very High' means that the verification threshold used will always be the one stored on the template. If the global threshold is set to 'Medium', the threshold used will never exceed medium.

Bio Wiegand format

Select the Wiegand format which the biometric reader uses to send the user code to the controller following a successful identification. This format must be defined according to the badge format in use (26 bits, etc.).
The default format is 'Standard 26 bit'.


Standard 26 Bits (ID 16 bits)
Custom Pass-through
Standard 26 Bits (ID 16 bits)
Custom 6 digits (ID 24 bits)
Standard HID 37 Bits (ID 24 bits)
Custom HID 37 Bits (ID 32 bits)
Custom Wiegand 44 bits (ID 32 bits)

See *'Custom' Bio Wiegand Format*

Fail String

For 'Standard Bio' Wiegand formats only. Checking this box opens a text box which allows the user to enter a code (1-65535) that will be sent to the controller following a failed verification (i.e. wrong finger).
If this option is not checked then no code is sent in case of an unrecognized finger.

Alt. Site Code:

For 'Standard Bio' Wiegand formats only. Checking this box opens a text box which allows the user to change the site code (sent, in addition to the user code, as a part of the Wiegand string upon a successful verification) by an Alternate Site Code.

Inverse Parity if denied:

For 'Standard Bio' Wiegand formats only. For readers that support fingerprint AND card for validation, it is possible that a valid card is passed, but the wrong finger is presented. This option, when enabled, allows to the reader to signal such a case by sending back a special code (linked to the cardcode). Then the application can show the denied event for the cardholder.

This option is not shown for BioPass and BioSmart readers.

Note: To use this option, the controller must be set to the mode 'Wiegand WITH parity check' (mode selected with its dip switches) and it must have an EPROM firmware version from 20/07/2004 or later.

Settings for other formats (i.e. not 'Standard Bio' Wiegand formats)

For any setting other than 'Standard', the preset values for Total bits, ID Start bit, and ID Length bits are displayed for customizing the Bio Wiegand format.

Inverse code if duress finger

Check if Bio reader must support 'Duress' finger (this information is accessed by pressing the *Biometrics Data* button in the *Cardholder/General* screen). In such a case, the reader sends back a special code (linked to the badge code) which the application recognizes. Access is granted, but it is shown as 'duress code'.
(This mode is ONLY allowed when the Bio Wiegand format setting is '26-bit' and requires that the controller hardware DIP switches are set so as to NOT check parity. The controller must have EPRROM firmware dated 20/07/2004 or later.)

Without biometric verification

Advanced Setting This is an advanced option, shown only by pressing Shift+F12
Check this box if fingerprint reading is to be bypassed.
(BioFlex, BioProx and BioSmart readers can be set to use only card identification and not require fingerprint scanning - usually for test purposes.)

Keyboard mode

Select this mode for BioFlex with Keypads

- <None>
- Buffered keys in string 26 bits
  (the PIN code that is typed in is sent to the BioFlex after pressing the '#' or 'SEND' key)
- Key by key
  (the PIN code that is typed in is sent to the BioFlex after each key press)

Inverse code if duress finger

Check if Bio reader must return an inverse code to indicate that a 'Duress' finger was identified
(This mode is ONLY allowed when the Bio Wiegand format setting is '26-bit' and requires that the controller hardware DIP switches are set so as to NOT check parity.

3.3.2.6 ANTI-PASSBACK LEVELS

This screen is used for defining the different Global Anti-Passback Levels that can be assigned. The screen cannot be accessed directly from a menu, but is opened by selecting the [...] symbols next to the **To** and **From** fields of **APB Levels** in the *Reader/Door Control* screen.

See *Anti-Passback – Concepts and Examples*

3.3.2.7 CONVENTION FOR READER TRANSACTION CODES

Code	Description
0	'Entrance' – this is a 'Clock ON' for normal T&A – no specific Work Category. Note: The name can be edited, but this transaction code should not be deleted.
1	'Exit'- this is a 'Clock OFF' for normal T&A – no specific Work Category Note: The name can be edited, but this transaction code should not be deleted.
Other	(Transaction Codes 2-20, 30-97) – may be allocated to designate Clocking ON (and Clocking OFF – see below*) for any specific working-time or non-working time activity. * Any 'Clock ON' transaction at a reader with a different Transaction code (i.e. belonging to a new Category) will automatically end the clocking for the previous Category. Therefore, while separate readers may be configured to record specific 'Clock OFF' transactions from designated work categories, in general this is not required.
20-30	Reserved for Access Control use – these should NOT be selected – where used, the system will automatically assign these values
97,98,99	Transaction codes with special meanings, such as 'Supervisor transaction'

3.3.2.8 ADDITIONAL INFORMATION ON MAGNETIC OR BARCODE BADGES

For badge reading, the system only records the number of digits set in the card code length parameter in the *Readers/Miscellaneous/Badge Format Tab* screen, although Magnetic and Barcode cards may contain other information as well.

By default, the system assumes that the card code will be in the first 8 characters of the information on the badge.

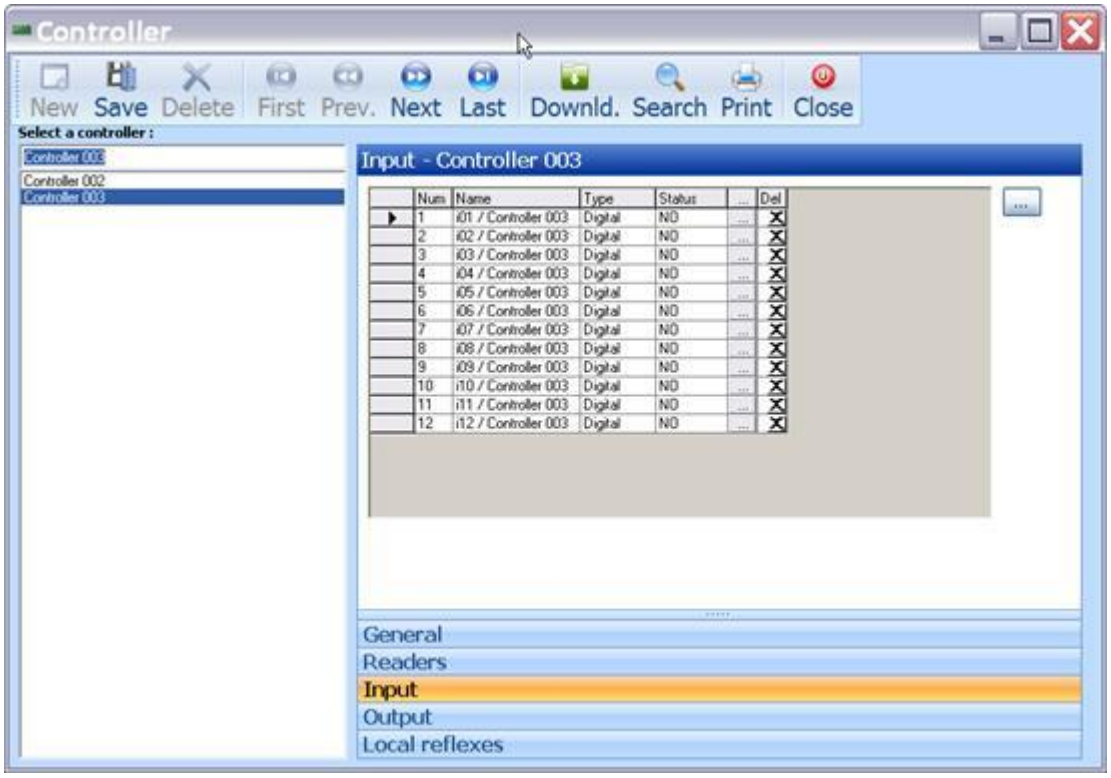
If the card code information is encoded in a different position, this field is used to specify the offset of the code. (Value between 00 and 29, the default value "00" corresponds to the first encoded character)

3.3.3 CONTROLLER/INPUT

From the *Controller/General* screen, selecting the Input Tab displays a List window, from which an input can be selected.

The informative table summarizes the parameters of the controller's Inputs.
Default parameters are defined according to the controller type.

Click on the [...] symbol of the required input to open the *Controller/Input/General* screen.



Input Tab

Input - <Controller n>
A table of active inputs for that Controller is displayed, showing Input name, Type, and Status

➢

Move the indicator up and down with the cursor arrows to select an Input

[...] (on a specific Input entry)

Click to open the *Controller/Input* screen to define the selected Input

✖

Click to delete the selected Input

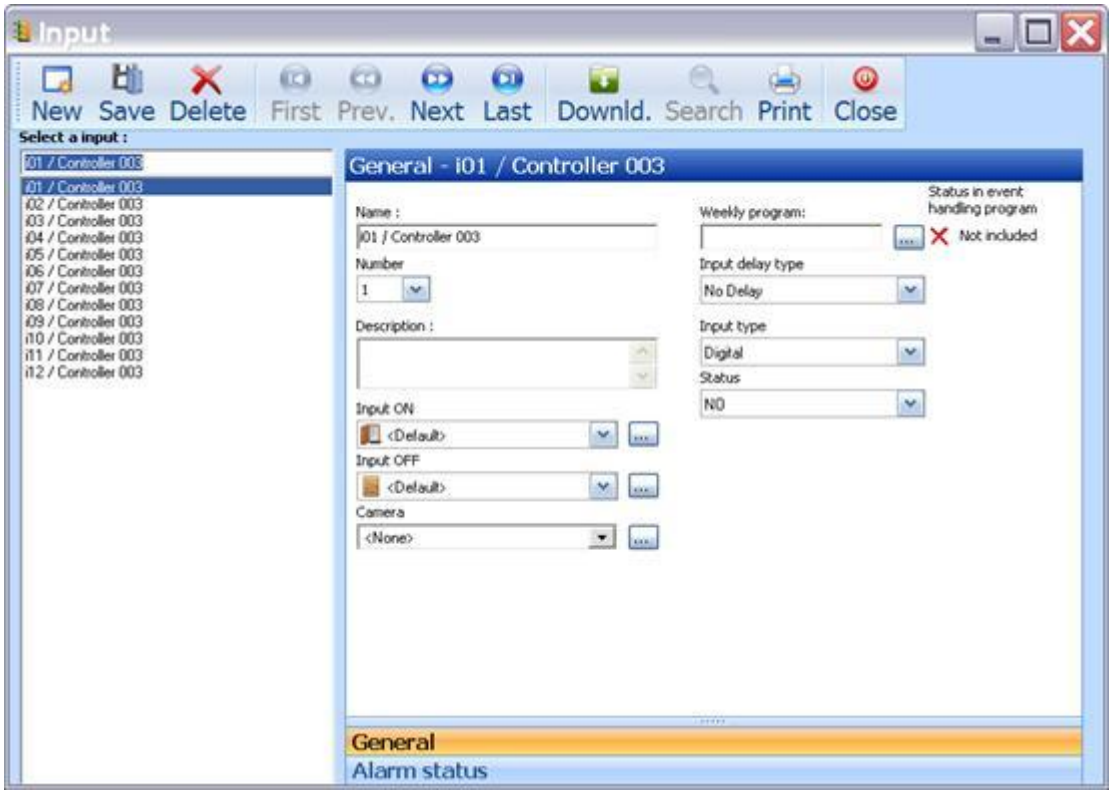
[...] (outside the list table)

Click here to access the *Controller/Input* screen to define a new Input (i.e. without selecting an existing Input)

3.3.3.1 CONTROLLER/INPUT GENERAL

The Input screen allows definition of the Input parameters.

Note for sites using Alarm Monitoring module: Many of the Alarm Monitoring features are activated by 'Input Groups' rather than individual Inputs. For that reason, it is recommended that sites using the Alarm Monitoring module should use Input Group definitions for inputs, rather than use defining individual Inputs



Name

Free text

Number

Select Input Number from dropdown.

Maximum number depends on Controller Type – see *Controller Support for Readers, Inputs and Outputs*

Description

Free text

Input ON

Use dropdown to select Icon to be displayed on the maps when this input is in the **alarm_ON** condition.

Clicking [...] opens the *Controller/Outputs/Icons Tab* screen, allowing a new Icon to be added to the list

Input OFF

Use dropdown to select Icon to be displayed on the maps when this input is in its normal state (NOT **alarm_ ON**)

Clicking [...] opens the *Controller/Outputs/Icons Tab* screen, allowing a new Icon to be added to the list

Camera

Use dropdown to select Camera to associate with this Input.
Click [...] to create a new Camera definition.
Note: Only for use with the Video module

Weekly programme

A Weekly Programme defines alarm arming or disarming periods.
This is a display-only field which shows to which Weekly Programme the alarm is assigned. To choose a different Weekly Programme or to assign one if not yet assigned, click on […] to open the *Event Handling* screen.

Status in event handling programme

Shows whether this Input is Included (✓) or Not Included (✗) in this Weekly Programme.

Note: This indicates only the status of the input as an individual. It may be armed/disarmed as a member of an Input Group (Alarm Zone), but that will NOT be indicated on this screen. To check if that is the case, check the Input's status using the *Active Alarms/Input* screen.

Input delay type

Select type of delay

- **No delay**: An alarm is raised as soon as the input is activated
- **After... (if on alarm)**: Alarm will be raised after … seconds, only if Input is still activated
- **After... (even if no more on alarm)**: Alarm will be raised after … seconds, even if Input is no longer activated

Input type

Select Input type:

- **Digital**: open or closed, i.e. the two possible states of the sensor/detector connected to the input
- **Digital (4 states)** (also called 'supervised'): in addition to two states above, the input may detect the states **Line_cut** or **Line_short** corresponding to the status of the line that connects the sensor/detector to the input

Note: A2-state input **may not** be defined as 4-state, but a 4-states input **may** be defined as 2-state provided that the line does not need to be supervised.

Consult the controller documentation to check which types of inputs are available on the controller.

Status

Select the status -

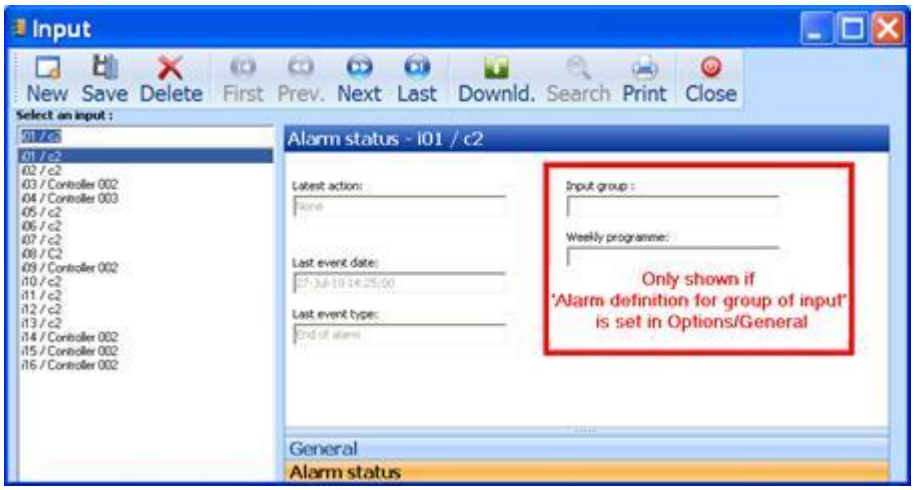
- **NO - normally open**: the input will raise an alarm if, while it is armed, its status changes from 'open' to 'closed'
- **NC - normally closed**: the input will raise an alarm if, while it is armed, its status passes from 'closed' to 'open'

Camera

Select a camera to be associated with this Input from the dropdown.
Use […] to define a new camera.

3.3.3.2 CONTROLLER/INPUT/ALARM STATUS TAB

This tab allows the user to check the current state of any Input.
(Information only – no updates can be done from this screen)



Alarm Status Pane

The selected Alarm Input is displayed – Default name is <input n / Controller n>

Latest action

Latest PC action sent to this input (PC actions always overwrite the input status as defined by its weekly programme)

Note: Such action may be sent manually, through the *Event Handling/Active alarms* screen, or automatically through a Global Reflex that the Operator predefines in the *Global Reflex* screen.

Last event date

Time and date of the last physical event on this input.
(Refers to a real event, not a PC action)

Last event type

Type of the last physical event on this input (start/end of alarm, line cut/short).
(Refers to a real event, not a PC action)

Input Group (see note below)

Shows Input Group (or 'Alarm Zone') to which this Input belongs. (Assigned in Input Group Screen, and also accessible and editable in *Event Handling Program - Alarms* screen via 'View group of inputs' radio button)

Weekly Programme

Shows Weekly Programme associated with the above Input Group

Note: To show the **Input Group** field and **Weekly Program** fields in this screen, the option **Alarm definition for group of input** must be enabled in the *Tools/Options - General* screen. This option also allows Input Groups to be set in the *Event Handling Program* screen

Many features use Input Groups, not individual Inputs: Many of the system's features are activated by 'Input Groups' rather than individual Inputs. It is recommended Input Groups be defined and the relevant individual Inputs be associated with them.

3.3.4 WORKING WITH ALARMS / INPUTS

In this section:

- *Arm or Disarm an Input*
- *Arming or Disarming Inputs Manually*
- *Reader Alarm Zone*
- *Arming/Disarming Alarm Zones from a Keypad Reader*
- *Door Alarm Buzzer*
- *Bypass Relay*
- *Rules for Alarm Status*

3.3.4.1 ARM OR DISARM AN INPUT

To raise an alarm, and therefore send the alarm transaction to the system, the logical state of the input must change from 'off' to 'on', during a time when it is 'armed'.

An Alarm input may be armed or disarmed as follows:

- Automatically though its Weekly program, if attributed.
- Automatically through the Weekly Program of the alarm zone to which the input belongs (if defined)
- Manually according to arming or disarming actions performed on the Alarm Zone to which the input belongs (if defined).

Note that if an Input is defined as part of an Alarm Zone, it is better to associate a Weekly Program to the zone and NOT to the Input. (i.e. When using the 'View Inputs' option in the *Event Handling Program* screen, a red 'X' must be selected for this input). Then, states of the input (armed or disarmed) will be defined by the Weekly Program of the Alarm Zone.

However, if a Weekly Program **is** attributed to an Alarm Zone and different one to an input of the zone, the Weekly Program attributed to the individual Input will get the priority, meaning that the Input will be armed or disarmed according to Weekly Program associated with it, and not that of the Alarm Zone. This can be useful when an Alarm Zone is associated with a Weekly Program but a *specific* Input of this zone must be always disarmed (for example, because the sensor/detector has failed): the Weekly Program 'Never' will then be attributed to this individual Input.

The automatic state of an Alarm Zone (armed/disarmed according to its Weekly Program) may be temporarily changed by manual actions of arming or disarming the zone for a specific delay (through *Event Handling/Action* screen). Once the delay is passed, the state of the zone (armed or disarmed) is back to its automatic mode i.e. according to its Weekly Program.

3.3.4.2 ARMING OR DISARMING INPUTS MANUALLY:

It is possible to manage the arm or disarm states of an input only manually, through actions (*Event Handling/Action* screen).

To set such a configuration, an Alarm Zone will be attributed to the input but neither the zone nor the input will get a Weekly Program.

Arming or disarming the zone, either for a specific delay or constantly, is then performed through Actions.

Note that if the zone state is manually changed for a delay (in sec. or min.), and its previous state was 'constantly armed' or 'constantly disarmed' (by a previous action), this previous state is restored after the delay.

At any time, the state of an input (armed or disarmed) can be checked via the *Active alarm/Input status* screen.

3.3.4.3 READER ALARM ZONE

A reader can be associated with an Alarm Zone so that access is denied when this zone is armed. This is done by selecting the **Zone Id** in the 'Reader Alarm Zone (F2)' field of the *Reader/Miscellaneous* screen.

Then, if the zone is armed, only cardholders defined as 'Supervisor' may access through the reader. When this is done, the zone will automatically be disarmed for a pre-defined delay to allow the supervisor to enter the zone and disarm it (though a reader with keypad or a DDS Terminal installed inside the zone).

This entrance or exit delay is defined in the 'Entrance/Exit delay F3' field of the *Reader/Miscellaneous* screen (+ link) as follows:

- For a delay in seconds, enter the delay (between 1 and 60) and select 'sec'.

- For a delay in minutes, enter the delay (between 1 and 191) and select 'Min'.

3.3.4.4 ARMING/DISARMING ALARM ZONES FROM A KEYPAD READER

If a reader is equipped with a keypad, it can be used by a supervisor to arm or disarm alarm zones as follows:

Arm one or all the zones:

Key-in the code 26XX# (where XX is the Alarm Zone number which is shown by clicking Shift F12 on the *Input Group/General* screen) and pass the supervisor card.
If XX=00: All the alarm zones managed by the controller are armed.
The zone is armed after the pre-defined exit delay of the reader, to give to the supervisor time to leave the zone.

Disarm one or all the zones:

Key-in the code 27XX# and pass the supervisor card.
If XX=00: All the alarm zones managed by the controller are disarmed.
Note that the zone is disarmed immediately after the command.
This is useful to disarm the alarm zone controlled by the reader, to access the zone.

When these supervisor functions are used, a message is sent via the serial port 2 of the controller (connected to a bus 2) to update the possible other controllers connected to this bus about the new state of the zone.

3.3.4.5 DOOR ALARM BUZZER

The reader buzzer may be used to indicate the door alarm state by selecting the 'Door alarm buzzer' option of the *Reader/Miscellaneous* screen: When the door alarm input is armed, the buzzer of the corresponding door reader indicates the status of the alarm as follows:

- If the door is forced, the buzzer is immediately activated in a continuous 'beep' until the door is closed.

- If the door is granted open (either by card or RTX button), the buzzer sounds an interrupted 'beep beep' when 75% of the 'door alarm delay' has passed. When the remaining 25% is over, it starts a continuous 'beep'. The buzzer is always stopped when the door is re-closed.

Door behaviour when the reader alarm zone is armed:

When an alarm zone which is attributed to a reader is armed, the reader doesn't let anyone access. It lights its red led for 1 second and sounds 3 'beeps' when an access is requested.

In case the cardholder is a 'supervisor', there are two cases:

- If the option 'keep card if motorized reader' is selected for this supervisor (screen 'Cardholder-Personal'), he is denied with the red led and beeper indication as above.
- If the option 'keep card if motorized reader' is not selected for this supervisor, he is granted access and the zone is disarmed during the pre-defined entry delay. This is in order to give him time to reach an alarm panel to disarm the zone.

A special transaction is sent to the system with code 127 ('Supervisor access + temporarily Disarm alarm zone' transaction) and a message is sent via the serial port 2 of the controller (connected to a bus 2) to update the possible other controllers connected to this bus about the new state of the zone.

Notes:

1. If the door alarm input belongs to the reader alarm zone, and if the Door Alarm buzzer option is selected, the beeper will not be activated after 75% of the door alarm delay if the door is left open too long. This is because the reader
2. If the supervisor doesn't disarm the zone, it will be automatically re-armed after the entry delay.

3.3.4.6 BYPASS RELAY

The second relay defined in the 'Second output' field of the *Reader/Door control* screen may be used as a Bypass relay if the option under the field is selected. It is then activated during the 'door alarm delay' (in steps of 5 sec. from 0 to 75 sec.). It is automatically stopped when the door is closed.

3.3.4.7 RULES FOR ALARM STATUS

An Alarm from an input may be raised according to its actual status (open or closed) in comparison with its normal status (open or closed) as shown in the table below:

	Input Actual Status	
Input Normal Status	**Open**	**Closed**
NO = Normally-Open	alarm_off	alarm_on
NC = Normally-Closed	alarm_on	alarm_off

The alarm is triggered when it status changes from 'alarm_off' to 'alarm_on' and if, at the time the change occurs, either:

- the input is armed, or
- the zone to which it belongs is armed. ('activated')

Notes:

1. An Alarm input or an Alarm zone is armed or disarmed as follows:
   - Automatically according to the Weekly Programme associated with it:
     - **armed** during the 'green periods' defined by this programme and
     - **disarmed** during the 'red periods' of the programme.
   - Manually through Actions, Processes and Global reflexes.

2. Predefined **local or network reflexes** that are linked to an input status may be triggered **even if the input itself is disarmed**.

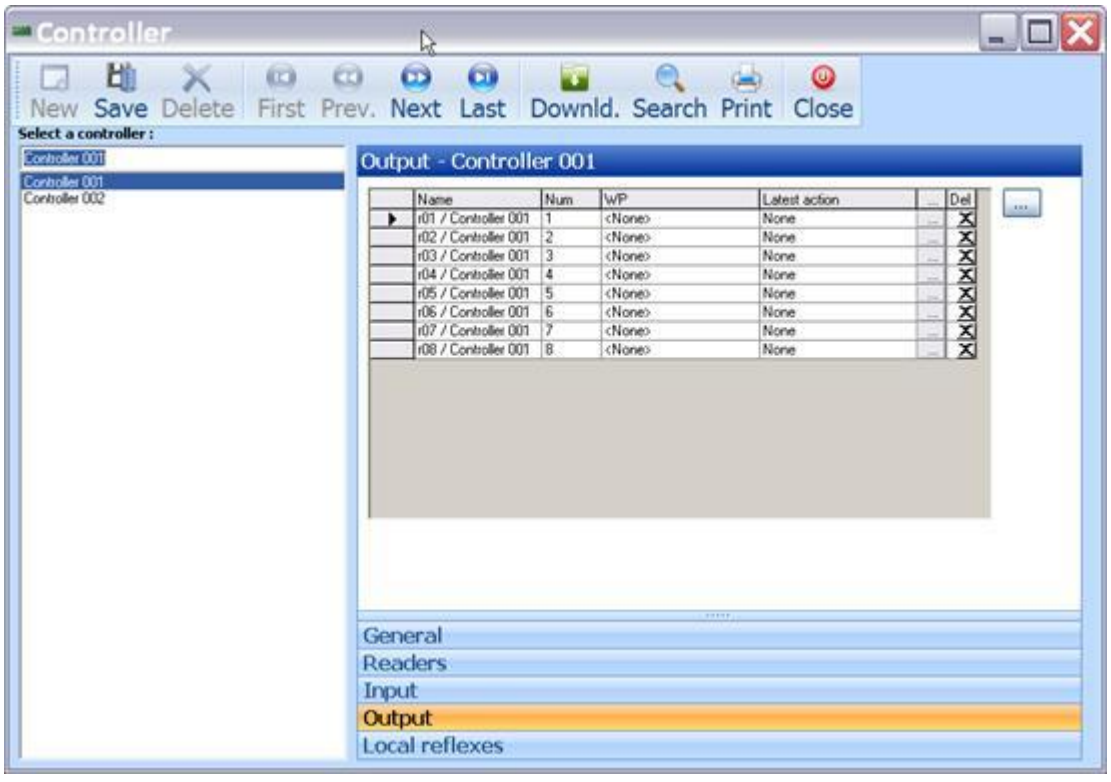
3. Centralized automatic **processes** and predefined **global reflexes** linked to an input may be triggered **only if the input is armed**.

3.3.5 CONTROLLER/OUTPUT

From the *Controller/General* screen, selecting the Output Tab displays a List window, from which an Output can be selected.

The informative table summarizes the parameters of the controller's Outputs. Outputs are the relays on the controller board (or on its extension board) to which external devices may be connected and activated by the controller - Door openers, sirens, etc.). Default relays numbers are defined according to controller definition.

Click on the [...] symbol of the required Output in this screen to open the *Controller/Output/General* screen.



Output Tab

Output - <Controller n>

A table of active outputs for that Controller is displayed, showing Output name, Number, Weekly Programme, Latest Action

➢

Move the indicator up and down with the cursor arrows to select an Output

[...]

Click to open the *Output Tab* screen to define the selected Output

✖

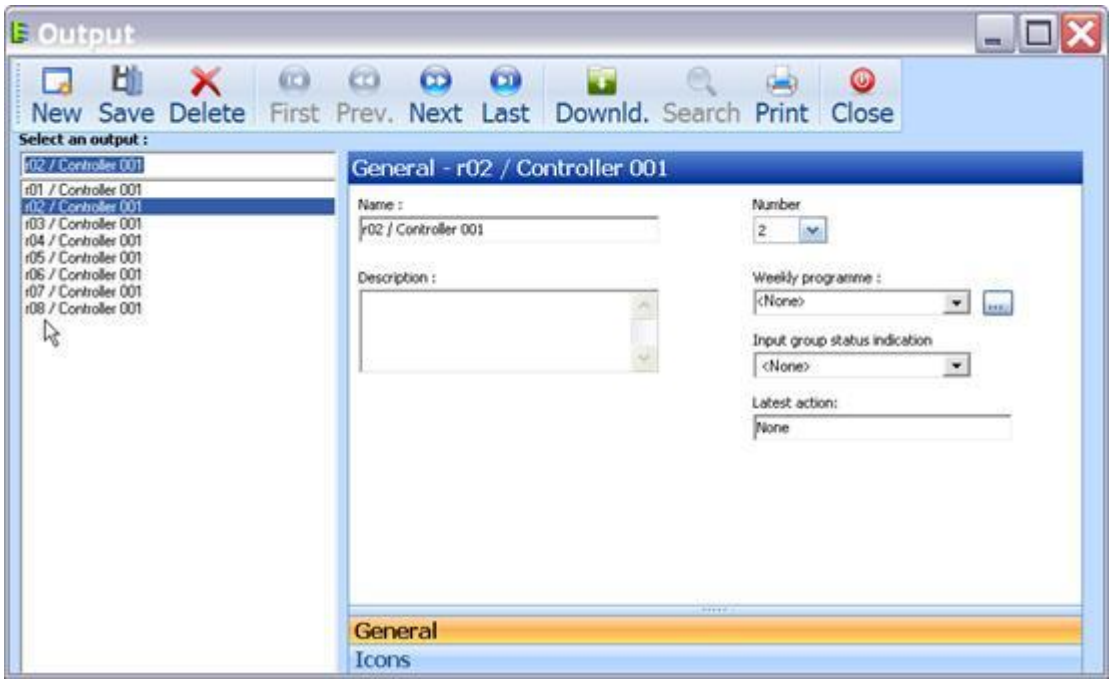
Click to delete the selected Output

[...]

(Outside the list table)
Click here to access the *Output Tab* screen to define a new Output (i.e. without selecting an existing Output)

3.3.5.1 CONTROLLER/OUTPUT GENERAL

This screen defines parameters for Outputs.



Name

Free text
Default name is <Reader n/ Controller n>

Description

Free text

Number

Select from dropdown.
Maximum number of Outputs depends on Controller Type – see *Controller Support for Readers, Inputs and Outputs*

Weekly programme

When a Weekly programme is selected, the relays will be automatically activated during the 'green periods' defined by this programme (and deactivated during the 'red periods' of the programme).

Click on […] to create or modify the weekly programme.

Caution - Do not allocate weekly programmes to Door Relays. Time activation of door relays must be set from the *Reader/Door control* tab. Allocating weekly programme through this *Controller/Output* screen may result in a definition conflict.

Input group status indication

By selecting an Input Group from this dropdown, the Output will be assigned to act as an Input Group status indicator: when the Input Group (alarm zone) is armed/disarmed, the relay is automatically on/off

(Requires DS216 firmware from 24.06.09 or later and TPL firmware dated 23.05.09 or later).

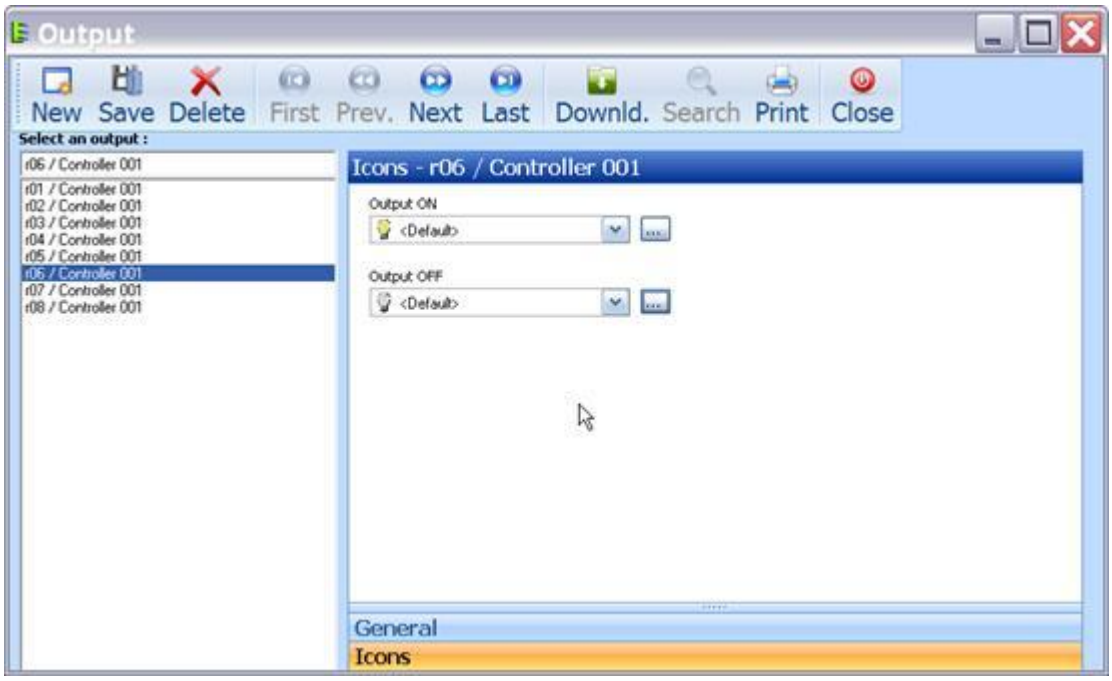
Latest action

Displays the last Action that affected the Output - this can be caused by either of the following:

- a **Manual Action** (see Action button in *Manual Actions/Relays Control* screen – Only Constant_On and Constant_Off commands are shown)
- an **Action/Process** activated manually or activated by a Global Reflex or other reasons that would trigger a Process automatically, such as Guard Tour, Counter, Parking. See *Process*

3.3.5.2 CONTROLLER/OUTPUTS/ICONS TAB[TOPICALIAS]

The Outputs/Icons tab allows specific icons to be associated with the selected Output. The set of available Icons is defined in the *Event Handling/Icon* screen.



Icon Tab

Icons - <Output, Controller>

Naming Relays: Default names r01, r02, . . ., the 'r' refers to Relay numbers

Output ON

Select the Icon to be shown if the Output is 'ON'

Output OFF

Select the Icon to be shown if the Output is 'OFF'

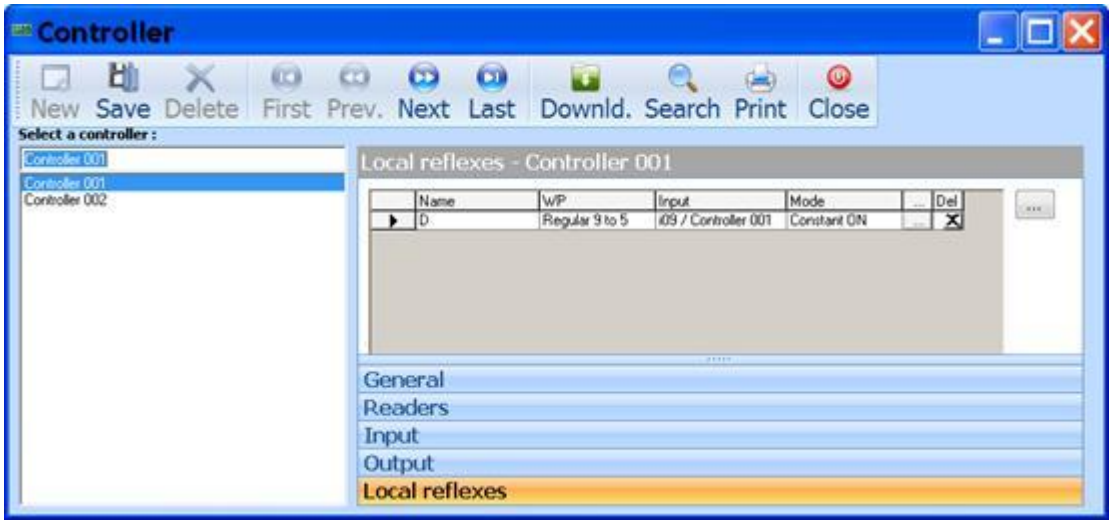
[...]

Opens the *Event Handling/Icon* screen to allow Icons to be added/changed in the default Icons file

3.3.6 CONTROLLER/LOCAL REFLEXES

From the *Controller/General* screen, selecting the Local Reflexes Tab displays a List window, from which a Local reflex can be selected.

The list summarizes the parameters of the local reflexes associated to the controller, and clicking on the [...] symbol opens the *Local Reflex/General* tab.



Local Reflexes Tab

Local Reflexes - <Controller n>

A table of local reflexes for that Controller is displayed, showing local reflex name, Weekly Programme, Input and Mode

➢

Move the indicator up and down with the cursor arrows to select a Local Reflex

[...]

Click to open the *Local Reflexes Tab* screen to define the selected Local Reflex

✖

Click to delete the selected Local Reflex

[...]

(Outside the list table)

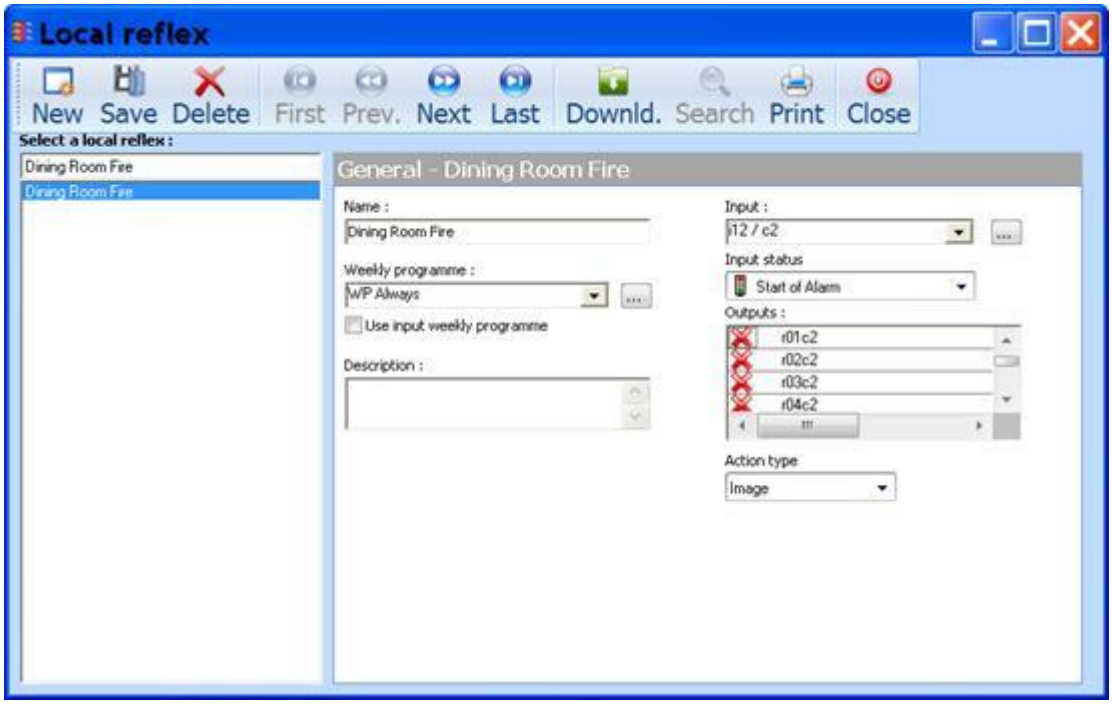
Click here to access the *Local Reflexes Tab* screen to define a new Local Reflex (i.e. without selecting an existing Local Reflex)

3.3.6.1 CONTROLLER/LOCAL REFLEXES GENERAL

A Local Reflex defines the Output activation following the trigger of an Input on the same controller.

Note:

Because the Inputs and Outputs are on the same controller, the reflex occurs even if communication with the controller is interrupted.



Name

Free text

Weekly Programme

Use dropdown to associate this Local reflex with a particular Weekly Programme.
Note: The Local Reflex will be activated during 'green' times in the Weekly Programme selected.

Click [...] to create a new weekly programme

Use input weekly programme

If checked, the Weekly programme associated with the reflex is the one defined for the Input itself. If this is done, then this disables the option (above) of associating the Local Reflex with its own Weekly Program.

Description

Free text

Input

Use dropdown to select the input triggering the local reflex.
Click [...] to create a new input

Input status

Select the status of the input which sets off the local reflex: **Start of alarm, End of alarm, Line cut, Line short, Open, Close, <Any Status>**.

Outputs

Click on the ✓ or ×buttons, to set which relays to activate

Action Type

Choose the type of action set off by the local reflex:

- **Image**: When the input is activated, the relay(s) is/are activated. When the input is deactivated, the relay(s) is/are deactivated at the same time
- **Constant ON**: When the input is activated, the relay(s) is/are activated and stays activated, even if the input is deactivated. The relay(s) must be deactivated by manual actions.
- **During**: When the input is activated, the relay(s) is/are activated for the predefined **Duration Time** (1 – 120 sec., 122sec for 'Alternated')

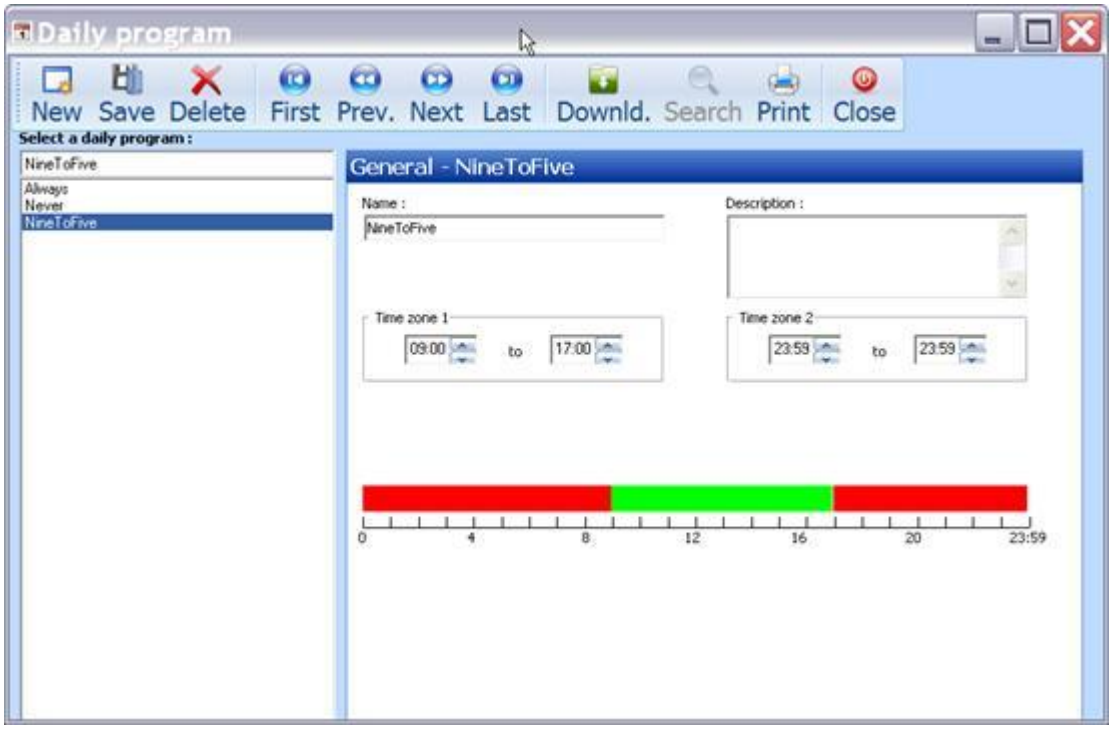
  Alternated mode ('During' = 122 Sec): The relay(s) is/are activated after the input is activated and stays activated; the relay(s) is/are only deactivated after a second input activation and stay/s deactivated, and so on.

3.4 DAILY PROGRAMMETOPICALIAS

A regular Daily Programme divides a 24H day into segments defined as 2 (or 4) **Time Zones**. With 2 Time Zones, there will be 2 '**green**' time periods (the Time Zones), and 3 '**red**' periods.

Note: If only one time zone is required, simply set the second 'green' start and end times to the same value.

Where a more complex day is required, it is possible to divide each day into 4 times zones and therefore create 4 'green' periods and 5 '**red**' periods (by changing the option '2 time zones' to '4 time zones' in the field 'Daily Programme Time zones' – see *Tools/Options/Communication*)



Name

Free text

Description

Free text

Time Zone 1

Start and end times of 1st 'Green' time zone

Time Zone 2

Start and end times of 2nd 'Green' time zone

Ruler

The ruler displays the Green and Red times visually

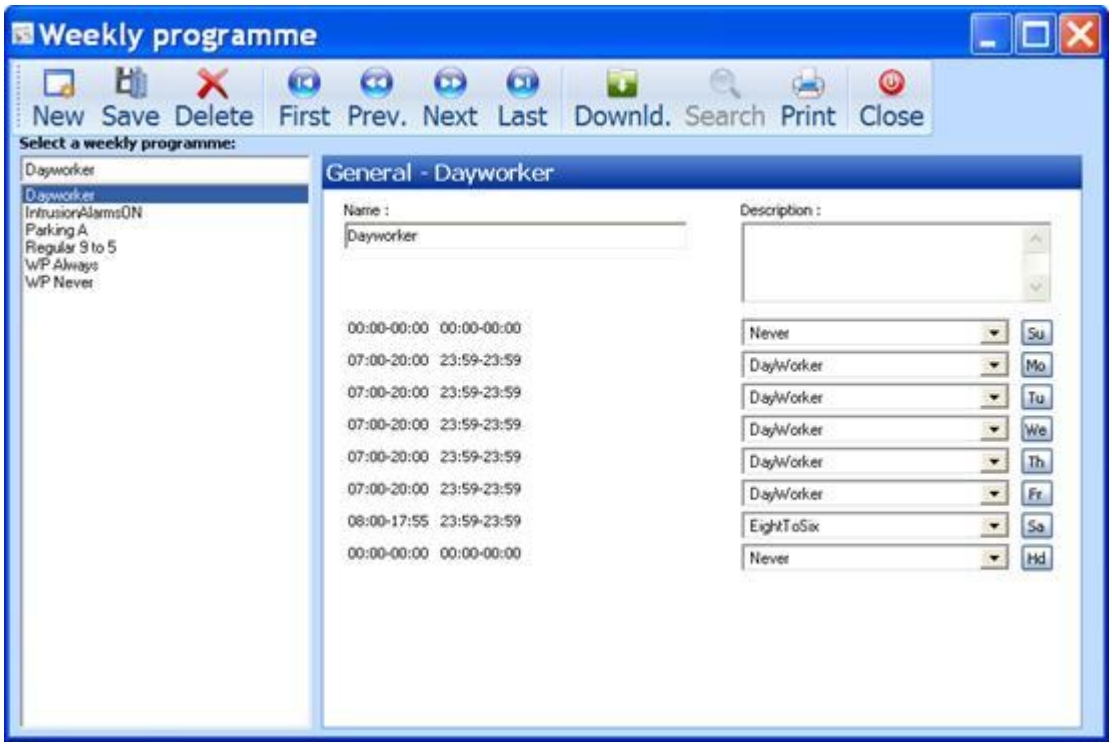
Notes:

1. The system maintains two default daily programmes – 'Always' and 'Never'. The names of these programmes can be edited, but they cannot be deleted, nor their parameters modified.

3.5 WEEKLY PROGRAMME

A Weekly Programme is made up of 8 Daily Programmes, one for each day of the week and an extra programme for holidays.

Tools Setting Two additional daily programmes can be added), to allow different access control rules on specific days in the year (i.e. the day before a National day, annually closure or exceptional opening, etc.) - see *Special Days*



Name

Name of displayed Weekly Programme. May be edited.

Description

Free text

Table of Daily Programmes

The list of *Daily Programmes* making up this Weekly Programme is displayed - one for each day of the week (Su - Sa), holidays (Hd).

A new Weekly Programme can be defined by clicking **New**. For each day, select the required programme from the dropdown for that day. For each day, the times corresponding to the chosen Daily Programme are displayed in the left-hand column.

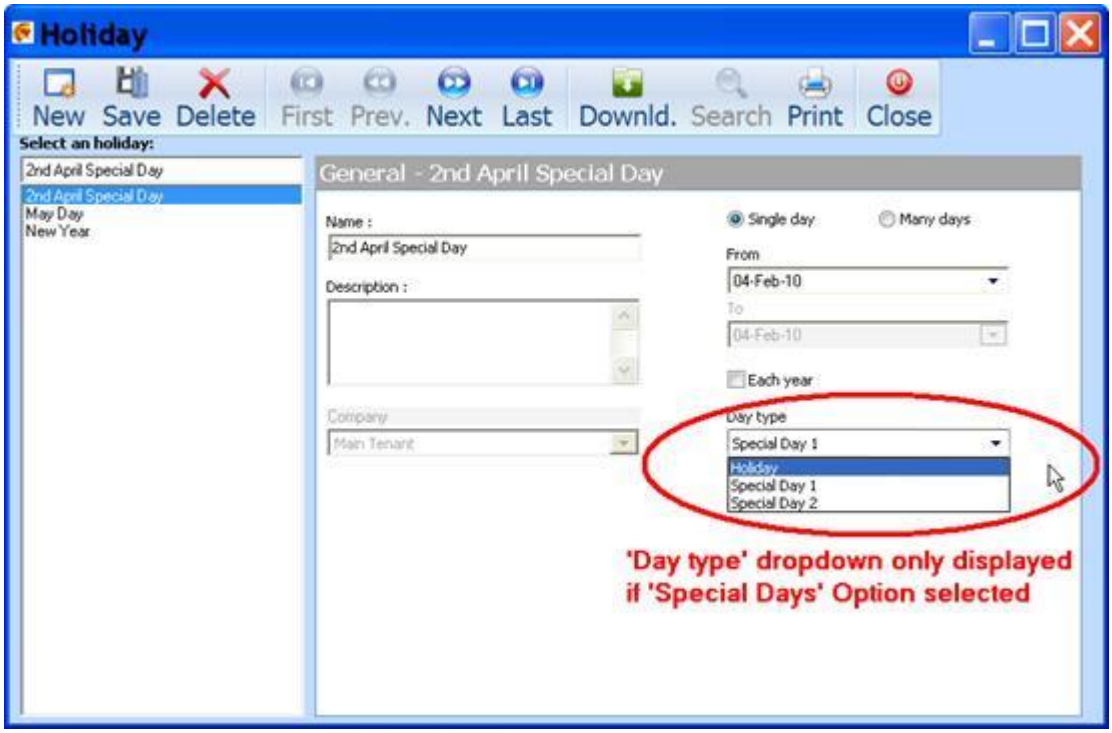
Clicking on the button showing the day name opens the corresponding Daily Programme screen. A new Daily Programme can be created there by clicking **New**.
Note: If Special Days option is used, two additional days can be defined. See *Special Days*

Notes:

1. Default Weekly Programmes - The two weekly programs "WP Always" and "WP Never" are defined by default. Their names can be changed, but they may not be deleted nor modified.

3.6 HOLIDAY

The Holiday screen allows a list of dates to be defined on which the system should use a different set of Daily Programme rules. During these holidays, rules of the 'Hd' program are enforced. This is the 8th Daily Programme defined in the Weekly Programme.



Screen opens on first existing Holiday in the list (Alphabetically).
To create a new Holiday, press **New**.

Name

Free text

Description

Free text

Single / multiple days

Use radio button to specify single or multi-day holiday

From

Use dropdown to open a calendar icon. Current calendar will show with 'Today' highlighted. Use the dropdown to display the calendar.
Select the required start date for the holiday. (see *Setting Dates Using the Calendar*)

To

Note: Only shown if multi-day holiday specified
Use dropdown to open a calendar icon. Select the required end date for the holiday

Each Year

Check this box if the holiday repeats on this date in all years

Day Type

Note: Only shown if Special Days option is used – defined in *Tools/Options/General*)

Days being defined as Holidays can be designated as Special Day 1 or Special Day 2. See *Special Days*

3.6.1 SETTING DATES USING THE CALENDAR

The Calendar opens with the current day selected as 'Today'.

To select a given month

- Display the list of months by clicking on the name of the month displayed
- Skip from one month to the next by clicking on one of the arrow keys (on either side of the month name).
  Scroll to later or earlier months by clcicking and holding the cursor on the arrow
- To select a diferent year, click in the Year number. Thsi will display up- and down- arrows that allow the year to be changed

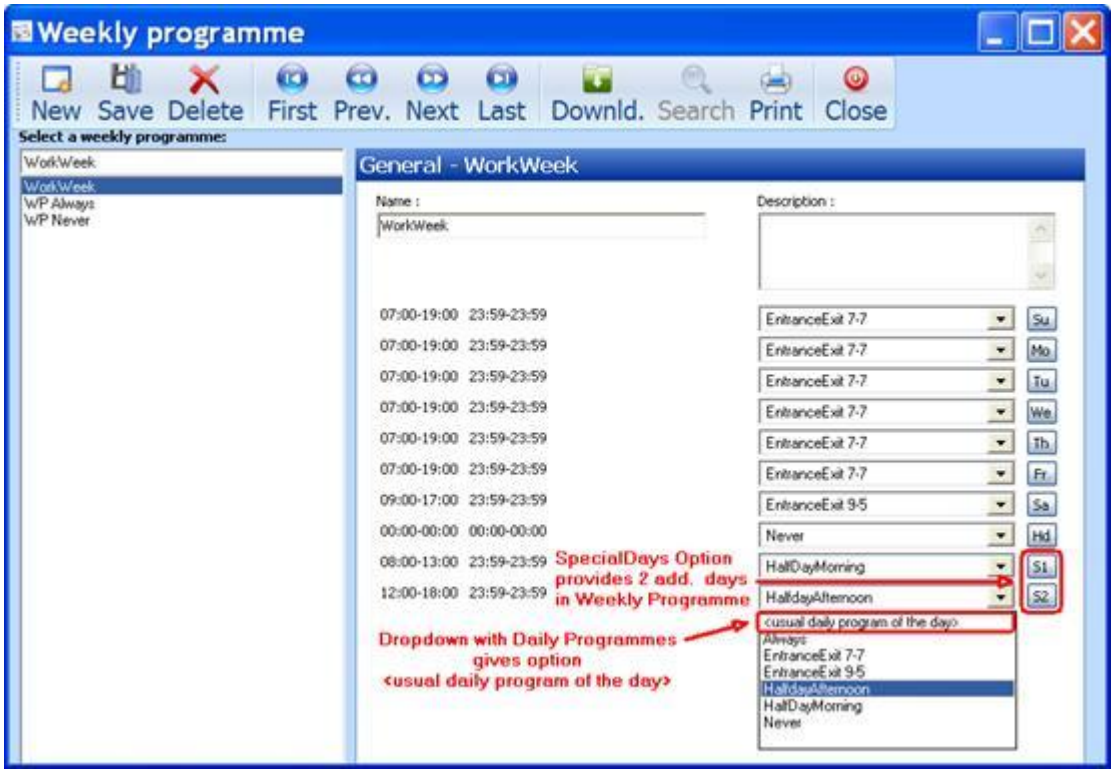
Once the desired date is selected, simply click anywhere outside the calendar box.
The calendar will be closed, and the selected date will appear in the **From** (or **To**) field.

If the date must be changed, click on the dropdown again and the calendar will re-open showing the selected date. However, the **Today** date at the bottom of the calendar will still be the current date, so the calendar can easily be reset by clicking on **Today**

3.6.2 SPECIAL DAYS

Users may need to define additional special days within a Weekly Programme in addition to the 'Hd' Holiday definition. This allows Weekly Programmes to be defined with up to 3 different Daily Programmes to be enforced on dates defined in the Holiday screen. This is useful where some special rules must be applied on a particular day (such as the day before and/or after a Holiday).
For example, rules for a half-day may be applied on a day before a day with Holiday settings.

The Special Days option is set in the *Tools/Options/General* screen)



S1, S2

Any day in the Weekly Programme may coincide with a Holiday (or Special Day) defined in the Holiday screen. The user may select special Daily Programmes to be enforced on such days.

<usual daily program . .>

For days defined as 'Holidays' and 'Special Days', user may select a particular Daily Programme, or may allow the usual definition of that day to apply

3.6.3 DEACTIVATING HOLIDAY SETTINGS

When using the dropdown to select a Daily Programme for the Holiday or Special Day, an addition option '<usual daily program of the day>' is available. Selecting this option means that even though a day may be specially defined in the Holiday calendar, the cardholder's normal Daily Programme for that day will be used.

Note: This option is only available when the Special Days Option is being used.

3.7 ACCESS GROUP

Access Groups specify which doors are accessible, which Weekly Programmes are associated with each door, and each door's Crisis Level. By assigning each cardholder an appropriate Access Group, the user defines patterns for "who can go where and when". If a particular door is defined as accessible in the Access Group (i.e. with a ✓ for that reader), then during the 'green time' in that reader's associated Weekly Programme, a cardholder belonging to that Access Group may be allowed access.

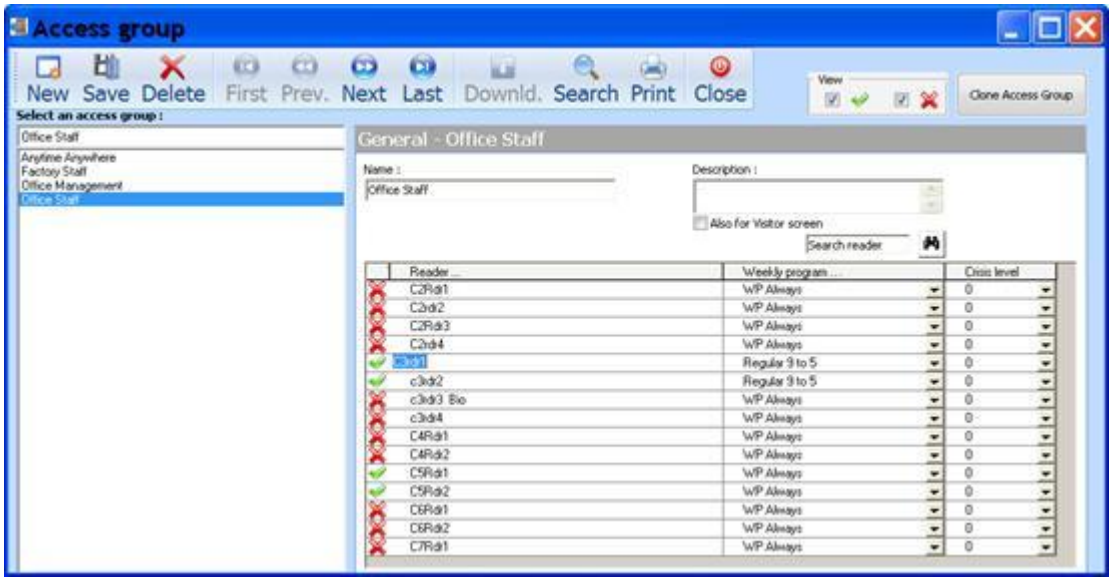
Note: In order to reduce the overall number of separate Access Groups that must be defined, the system allows a cardholder to be associated with Multiple Access Groups.
See *<Multiple> Access Groups*.

Default Access Group

An access group "Anytime Anywhere" is defined by default. This provides permanent free access to all doors. Its name can be edited, but this group can neither be deleted nor modified.

Minimal authorization by default

When a new Access Group is created, all doors are selected and all are set to **X** (=no entry).



View

Checking the relevant box to show only Readers allowed for this Access group

Clone Access Group button

Where a similar access group is needed, a copy of the selected access group can be created (named "copy of <selected AG>. . .).
The clone can then be renamed and modified as required.

Name

Free text

Description

Free text

Also for Visitor screen

Check this box if this Access Group can be used for Visitors

Note: When *LimitUserAG* is set, the check box 'Also for visitor' in this screen is disabled, as the LimitUserAG option has higher priority.

Search Field

To go directly to the entry for a particular reader, enter name or partial name and click search Icon. Readers matching the search string will be highlighted

Table of readers

Table shows all readers, with their associated Weekly programme and Crisis level.

Status indicator

✓or ✗

Status of the selected reader in this access group can be toggled by clicking on the symbol (granted (✓) or denied (✗))

Weekly Program

Use dropdown to select periods during which access is to be granted for that reader according to the 'green' periods set in the Weekly Programme.

Different error message in the log: Please note the difference in the error message that will associated to an access refusal in the following two cases:

	Reader …	Weekly Program …	Error message if access denied:
✓	Rdr1 / Controller 1	WP Never	"Not authorized at this time"
✗	Rdr1 / Controller 1	WP Always	"Reader not allowed"

Note: Maximum number of usable programmes

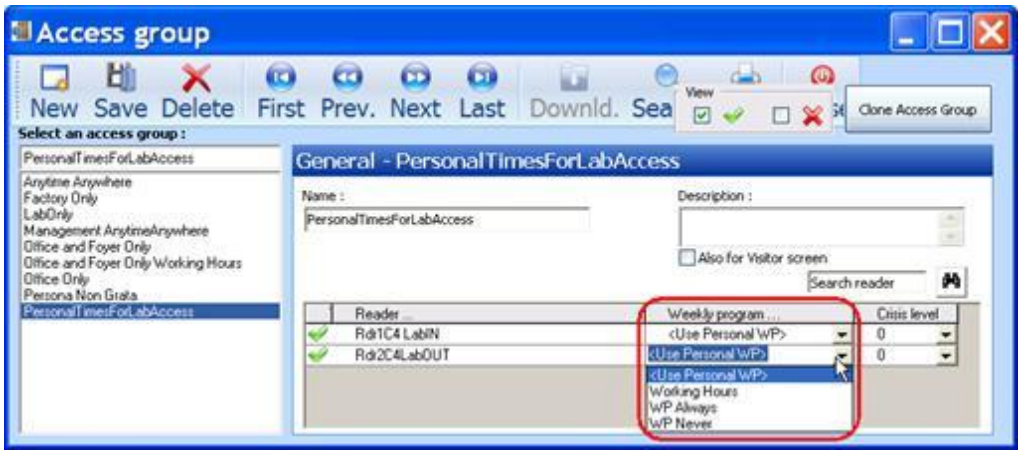
Many daily, weekly and holiday programmes can be created in the whole system. However, **each controller** may only include a restricted number of programmes. See *Controller Memory Capacity*. An error message appears if the limit of programmes has been exceeded for a specific controller.

Setting Readers to use Personal Weekly Programmes

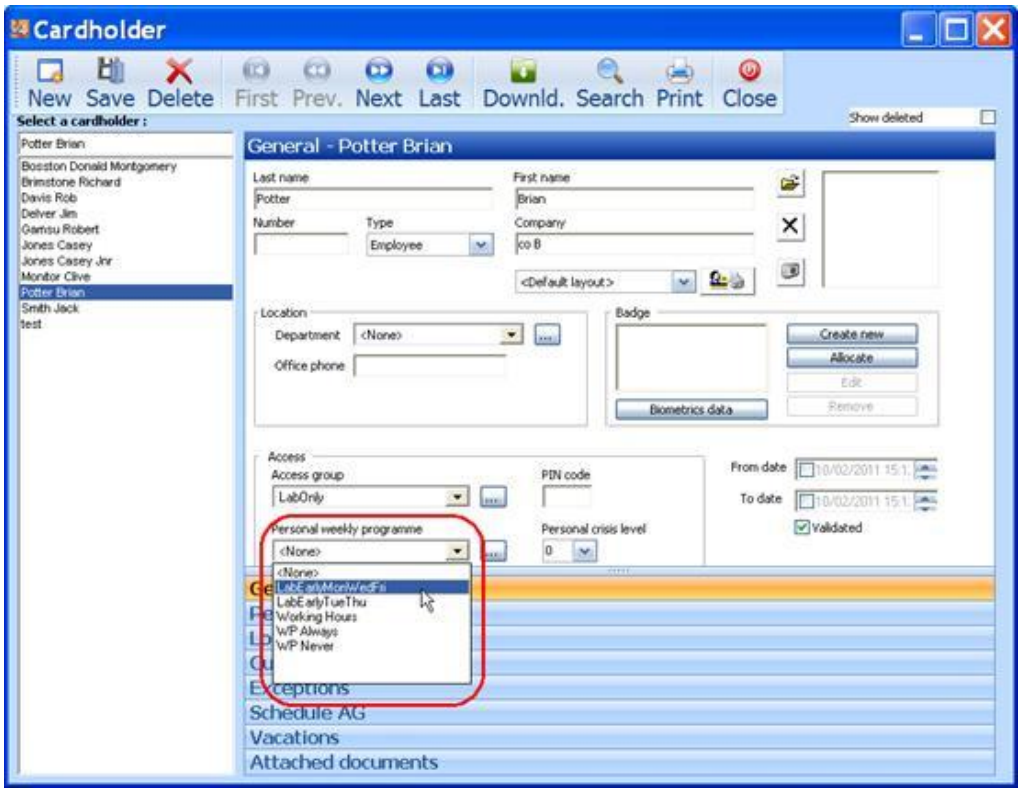
Personal Weekly Programmes are used when many Cardholders access the same groups of doors, but with different time rules.

The system does not limit the number of Access Groups. However, if a large number of cardholders need to be given the same list of authorised doors but with different access times (different Weekly Programmes) due to the variability of their work hours, it is recommended not to create separate Access Groups for each variation of working hours (Weekly Programme), but rather to use 'Personal Weekly Programmes'

- Create an additional Access Group that provides access at the authorized doors. Then at each of these doors, Select the option: <Use Personal WP>



- Restrict access by using Personal Weekly Programs in the personalized data of the cardholder (Cardholders screen).



Crisis level

Use dropdown to select Crisis Level to be used at this reader, for cardholders associated with this Access Group.

(0-7), Default = 0

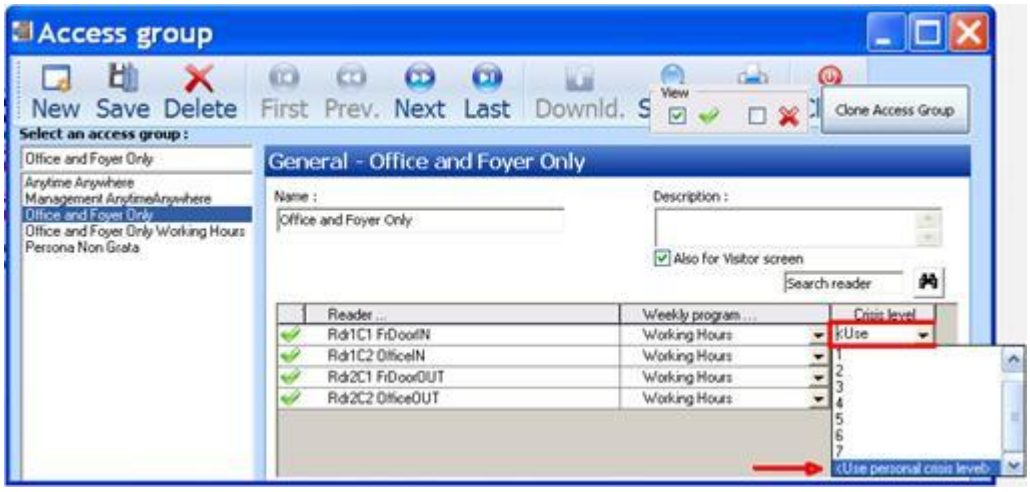
For explanation of Crisis Level, see *Manual Action / Crisis Level*

Note: When defining Access Groups, then all readers connected to a common controller must have the same value set for Crisis Level.

On existing Access Groups, when the Crisis Level for a single reader is changed, the application automatically changes ALL other readers on the same controller to the same Crisis Level.

Setting reader/s to use Personal Crisis Level

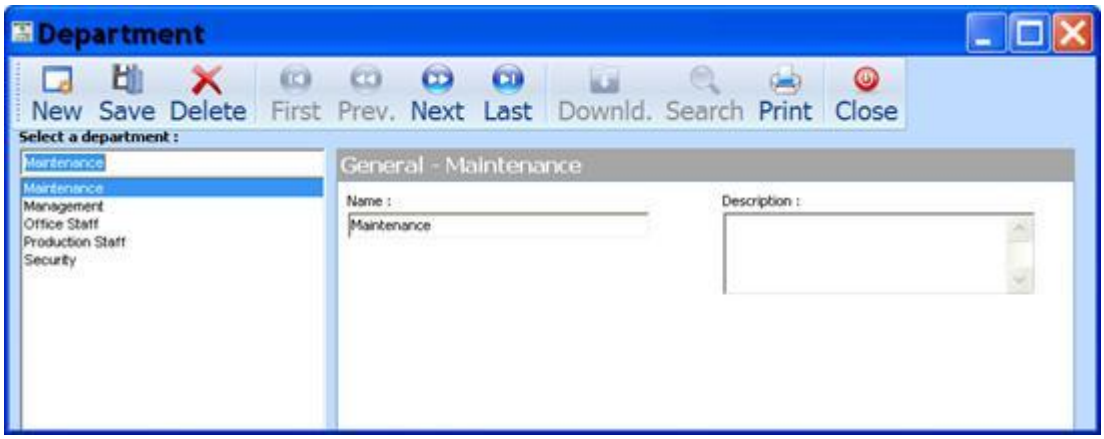
If 'Use Personal Crisis Level' is selected rather than a value, then the value to be used will be taken from the Personal Crisis Level value set for the specific cardholder in their Cardholder/General screen.



3.8 DEPARTMENT

A department is an informative notion, which allows cardholders to be grouped for certain T&A functions.

Note on Time and Attendance T+: When the T+ Time and Attendance Option is used, all cardholders in a department share the same Daily Shift and Personal Contract. Thus, for each group of employees that must have its own definitions, separate departments are needed.



Name

Free text. Departments are used for editing cardholders reports sorted by department and to associate cardholders with specific Personal Contracts.

Description

Free text

3.9 AREA

'Areas' define how the different parts of the site are described, so that the system can register which cardholders are 'inside' a particular Area or sub-Area. The cardholders' records are updated each time they pass their badges at any reader for which the fields **Area Path**: **From** and/or **To** have been set (in the *Reader/Door Control* screen).

A cardholder's current location can then be established by using the *Cardholder/Location* screen or producing a report using the cardholder **Area** field.

Name

Press New to define a new Area

Free text.

Description

Free text

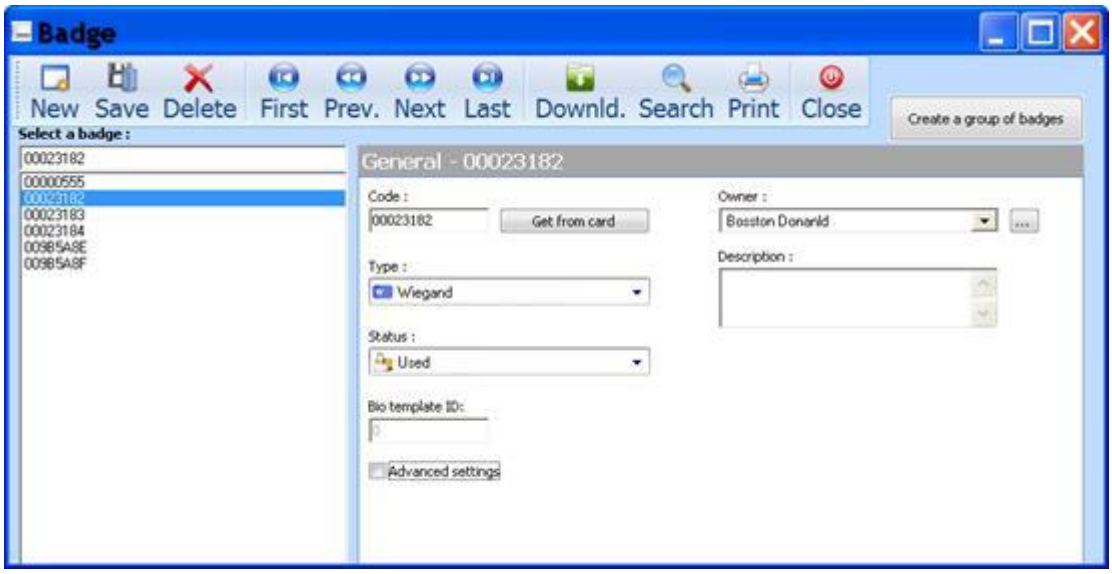
Areas

A Tree diagram of the Areas is shown.

The hierarchy can be edited using the ↑↓ and ←→ arrows

3.10 BADGE

This screen allows new badges to be registered in the system, and the parameters of new and old badges to be displayed and modified. An inventory of badges can be registered in the system so that they are ready to be issued.



Create a Group of Badges (Button)

Note: To create a group of badges, do not click on New.
Click on this button and open *Create a Group of Badges* screen.
(fully described in that screen)

Code

Enter the Card code, in decimal or hexadecimal
Leading zeros will be entered automatically to the default length of the card

Card Ranges: Where all the card codes start with a same prefix (for example **0500**12345, **0500**12346, etc.), a default 'range prefix' can be set (i.e. **0500**). The prefix chosen will then be automatically added at the beginning of the code when a new badge is created.
– See 'New' in the Principal Menu section of the *Options /General* screen.

Get from Card (Button)

Opens *Get from Card* screen, for use if card code is not known.

The code may be imprinted on the badge and human-readable, but generally, it is hidden. The Get from Card feature allows the code to be read and entered into the system without needing to be typed in

Type

Displays the Badge technology of the selected badge.
When defining a new badge, the badge type default is defined in the 'Default badge technology' in the Principal Menu section of the *Options /General* screen

Where multiple badge types are in use, use the pull-down to choose the technology of this badge.

Note: Badge information (and therefore Access information regarding the cardholder who owns the badge) is only downloaded to controllers that support the selected badge technology.

Status

Use dropdown to change badge status if required.

- Free – default until badge is allocated to a cardholder
- Used – Badge is allocated to a user
- Cancelled – (Automatically invalid)
- Lost – (Automatically invalid)
- Stolen – (Automatically invalid)

Bio template ID

(Only shows after getting a card from a Bio Reader)
Number identifying this card, to be used by the Bio reader in conjunction with the Bio template. This number is normally calculated by the system, based on the card code and the format defined for the reader in *Reader/Misc/Badge Format* tab.
It is editable in case the number must be manually entered.
See *Advanced Settings - Bio Template Id*

Owner

Displays the name of the cardholder to whom the card is allocated.

If the badge is not yet allocated, <none> is displayed, followed by a list of Cardholders who do not yet have badges. Select the member of the list to whom this badge is to be allocated.
Click [...] to open the Cardholder screen and capture data for the new Cardholder or to edit information for the existing Cardholder.

Description

Free text

Note: The default Badge Length is be set **per Reader** in the *Reader/Miscellaneous/Badge format* screen.
This allows more than one format to be used within one installation.
However, all Readers on any particular controller **must** have the same length.

3.10.1 GET FROM CARD

To get the card code from a regular reader, pass the card at reader: when the card code appears on the window, select it and press OK.

Available cards

Table of cards read since **Get from card** was selected.
Select the card to be used from the list, click **OK** to accept.
Otherwise Click **Cancel** to return to the Badge screen

Get card code from Bio Reader

If the reader to be used is a bio reader, then the reader must first be selected using this dropdown
Select the relevant reader in the lower 'Get card code from bio reader' window
Press the button at the right of the list and pass the card at the selected reader
When the card code appears on the window, select it and press OK

Notes:

1. Clicking Delete for a record will only flag the badge record as deleted. Records can only be deleted from the system using the Delete Tab in the *Create a Group of Badges* screen
2. Note on 'Get card code from Bio reader':
   If the reader being used for the 'Get a card' function is a Bio reader, the bio reader must be selected and this button must be used to instruct the reader to send the card code that answers this request.

3.10.2 USING THE BADGE SEARCH

Displaying the list of all the allocated badges

Double click on the "Search" icon of the icon bar.

Performing a search on a specific type, status or owner

To find a badge from its type, status or owner:

- Click on the "Search" icon of the icon bar (or type "F10" key)
- Select the desired type, status or owner
- Click on the "Search" icon a second time
- If the badge is allocated, details of the badge will be displayed on the screen
- If no matching badge is found, the fields remain empty and the screen is greyed out
- Click on the "Search" icon to display the list of all the allocated badges

Searching a badge from all or part of its code

When using the "Search" icon, if the first characters of the code have been entered, the system will display all the badges that start with the desired sequence, after clicking the "Search" icon a second time.

Examples:

Code field	The system displays all the card codes with these attributes
32	Beginning with "32"
32%45	Beginning with "32", which contain the characters "45"
_ _ _ _32_ _	Which contain the characters "32" at the 5th and 6th position

Note:

% will replace several characters

_ (underscore) will replace one single character

3.10.3 ADVANCED SETTINGS - BIO TEMPLATE ID

Clicking on the Advanced Settings checkbox in the Badge Screen opens the following additional fields for entering information about Biometric cards:

Bio template Id

Shows the Bio Id calculated by the system. If zero, then a new number must be calculated. See *Advanced Settings - Bio Template Id*

Calculate buttons

- Calculate one – recalculate the Bio ID for this badge
- Calculate all – recalculate the Bio ID for all Bio badges

Get Bio ID

Dropdown shows list of Bio readers from which the code could be read – select the reader that will be used. (for BioProx and BioFlex only)

ID button

Select the code to be used, and click ID to accept it

Caution: Make sure that the system has calculated the Bio ID and that is not 0.

Cards that were defined prior to the creation of the first biometric reader, will have Bio ID = 0. For these cards, calculation of the corresponding Bio Template ID is done automatically only when the card owners enrol their fingerprint.

After a biometric reader definition, each new badge will receive a Bio ID code automatically. Once this has been saved, it is displayed in the 'Bio template ID' field.

The user can also initiate calculation of the Bio Id/s by selecting the "Advance settings" box and pressing 'Calculate 1' (to re-calculate the selected badge) or 'Calculate all' (for all badges in the database, including those that are not 0).

If the field remains empty or null it means that the system cannot calculate the Bio ID and it has to be entered manually or be read directly from the biometric reader.

To obtain the code from the card itself, use the 'Get Bio ID' window field. In that window, select the reader from the list, click on the 'ID' button, and pass the badge at the biometric reader.

3.11 CARDHOLDER

These menu and sub-menus screens allow definition of the cardholder's parameters in the system.

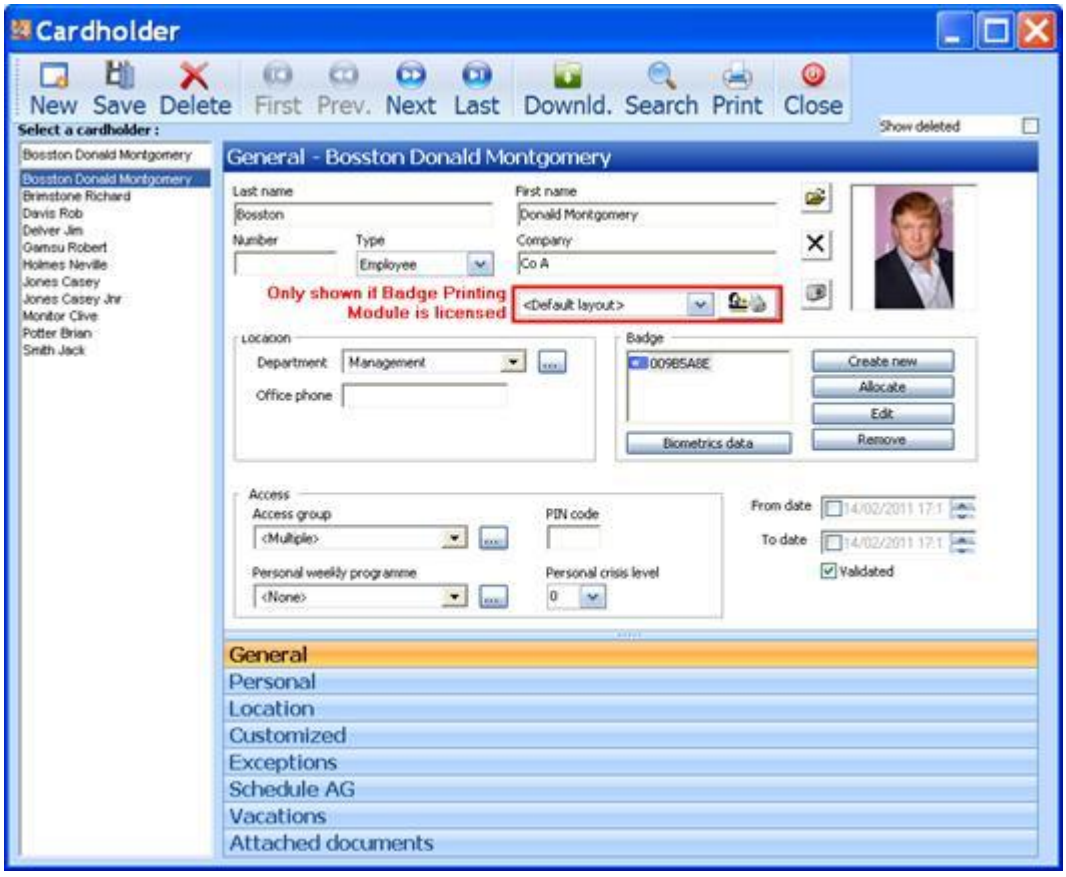
Related Links	
Main Topic	Cardholder/General
Tabs	Cardholders/Personal Tab
	Cardholders/Location Tab
	Cardholders/Customized Tab
	Cardholders/Exceptions Tab
	Cardholders/Schedule AG Tab
►	Cardholders/Vacations Tab
	Cardholders/Visitor Tab
	Cardholders/Attached Documents

3.11.1 CARDHOLDER/GENERAL

This screen records general information about the cardholder.

Cardholders can be registered in the system before badges are allocated to them. Records may be kept of badges that have been issued to cardholders and then withdrawn, such as visitors and employees who may have left the company.

Note: See specific notes for *Guard* Screen and *Visitor* Screen



The screen opens displaying the first record (alphabetically by Name).

See *Show Deleted Badges*

Last Name

Free text

First Name

Free text

Number

An optional number identifying the cardholder in the organization.

Name and Number Settings

The sequence of cardholder records in the system is by 'Lastname:Firstname'.
It is possible to override this and create cardholders with the same last and first name, by checking the **Allow duplicate name of cardholders** field in the *Tools/Options/General* screen. Unique numbers must then be entered in the "Number" field for cardholders with identical names

Unique primary key Where data is to be exchanged with external databases (through the *Cardholder Import* tool) , the Number field is used as the primary key for cardholder records. In this case, the .ini file must be set to force all records to contain unique numbers:

```
CardholdersNumberUnique = 1
```

With this setting, a unique value must be entered in the field for each cardholder – even a blank field is not acceptable.

Type

Use dropdown to choose Visitor, Employee, Guard, Deleted

Note:

If type is Guard, then see also *Guard* Screen

If type is Visitor, then see also *Visitor* Screen

Company

Free text

Note: This field is memo only – it is NOT related to the 'Company" Record in a multi-company site

Badge Printing dropdown and Icon

Note: The Badge Layout dropdown and Badge Print Icon are only shown if the Badge Printing module is licensed. – see *Badge Printing Design*

Select Layout dropdown

This will show <default layout> unless alternative layouts have been defined
If alternative layouts are defined, use dropdown to choose layout.

Badge Preview/Print (button)

This button accesses the *Badge Printing Preview* and *Badge Printing Design* screens

Location

Department

Use dropdown to select the cardholders department. Default is <none>.
Click [...] to open the Department screen if a new department must be defined

Office Phone

Free text

Badge

Shows number and icon of type of badge allocated to this cardholder.

- If no badge has been allocated yet, the field will be blank.

Create new

Click **Create new** to open the *Badge* screen, then:
Either - Enter a new badge number in the **Code** field,
- Or - Click **Get from card** to register a new badge by reading it at a reader
(Any unallocated badges read at any reader will be shown in the table)
Choose a badge in the list and Click **OK** to allocate the selected badge

Allocate

To allocate a badge from existing unallocated badges

- Click **Allocate** to open the *Choose a card* screen
- Choose a card from the list of unallocated cards, and click on OK to return to the Cardholder screen

Note:

If a 'non-allocated' card (i.e., card with 'free' status in the database) is passed (read) whilst this screen is open, then that card is automatically selected from the list of free cards. Thus the user does not need to search through all unallocated cards.
The selected badge will be shown in the new Cardholder's record.

Edit

Opens the *Badge* screen to allow information to be edited

Remove

Clears the current badge from the record so that a new badge can be allocated.
The system allows only one card of a particular technology to one cardholder.

Access

Access group

Default is <Anytime Anywhere>
Use dropdown to assign the cardholder to a specific AG
Clicking [...] opens Access Group screen to see details and/or define a new AG

Note: The ini file entry ForceMultipleAG = 1 prevents the user from allocating individual Access Groups.
After modifying this entry to 1 and restarting the application, all cardholders who previously used only one AG are automatically redefined.

This setting may be used for regular sites, but is mandatory for sites using the MultiSite module.

See *<Multiple> Access Groups* .

Assigning Multiple AGs to a cardholder

To assign Multiple Access Groups to the cardholder, click on <Multiple> in the dropdown list. The *<Multiple> Access Groups* screen will open.
If the cardholder has already been assigned Multiple Access Groups, then moving the mouse over <Multiple> will show a tooltip with the assigned Multiple Access Groups.

Also, see *Tools/Multiple Access Group Wizard* which includes information on how to use the Wizard to change one or more selected cardholder's Multiple Access Group settings

PIN code

Enter 4-digit PIN code for this cardholder to use at a keypad reader

Personal weekly programme

Use dropdown to select Personal weekly programme for this cardholder.
Default is <none>
To add a new Weekly Programme, click [...]

Using Personal Weekly Programmes: When a Personal Weekly Programme is selected for a cardholder, it affects only those readers for which, in the Access Group to which the cardholder belongs, the WP field option '<use personal WP>' is selected

Personal crisis level

Default 0. (0-7)
The value set for Personal crisis level is only used at Readers where the value set for Crisis Level in the Access Group screen is set to <**Use personal crisis level**>. If no Access Group definitions contain this entry, then the default '0' should not be changed.
See Manual Action/Crisis Level

Controlling Badge Validity – From, To fields

These fields allow the user to set dates and times that define the period during which the badge may be used.
These parameters are entirely dependent on the PC running the system – they are not implemented by the controllers
In the Tools/Options/Communications screen, the setting '**Check validation of cardholders every …Min**' allows the user to specify how often the system should scan the database for validity of all cardholders, using information in these Card Validation fields. Upon finding that the status of a badge needs to be changed, the system will then send appropriate messages to all controllers to update the status of such badges.

Settings for using these fields: Note that the user only sets the interval between scans – Thus in order to be sure that controllers are updated in time, the user must allow enough time for the update to be sent from the server so that the controllers are updated before the time of the requested change.
For example, if updates are to be sent every 30 minutes, and a badge must be valid (say) at

8.00, then the 'From' time for the badge should be set at 7.30 so that a scanning will definitely have occurred between 7.30 and 8.00.

From date

Normally unchecked. If checked, the badge will not be usable before the date and time set. This allows the badge to 'become' valid at a future date.

To date

Normally unchecked. If checked, the badge will only be usable up to the date and time set. This allows the badge to 'expire' at a future date.

Validated

When the 'From' and/or 'To' date and time **are not used**, this checkbox allows to validate or not the cardholder in all the system.

When the 'From' and/or 'To' date and time **are used**, this checkbox is automatically updated according to the dates and times chosen.

Note: It is possible to inhibit automatically all cardholders who have not used their card during X days. See *Automatic Card Inhibition if a Card not used after X Days*.

Picture section

<Open File> Icon

Opens list of Identity Pictures – opens a standard Windows file search window, starting at current system location of the /Media/Portraits folder.

Select the appropriate photo, and click Open to associate it with this cardholder.

If the browse button is used and a picture from another location selected, then that picture will be copied into the Portraits folder.

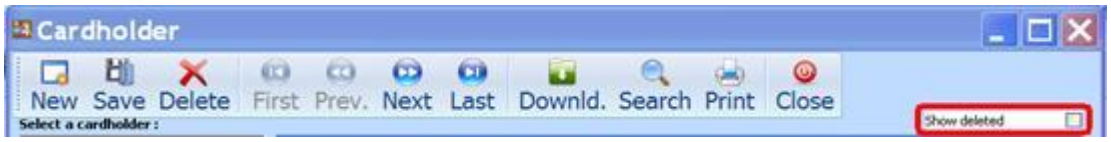
<*>

Removes the association of the current picture with the cardholder. (Does not delete the picture in the Portraits file).

<camera icon>

Click on camera icon to use a camera connected to the PC to take a picture. The picture will be stored in the Portrait directory with a temporary name, which should be edited there before another picture is taken.

Show Deleted



Check this box to display all cardholder records including information on 'deleted' cardholders. If not checked, deleted records will not be shown.

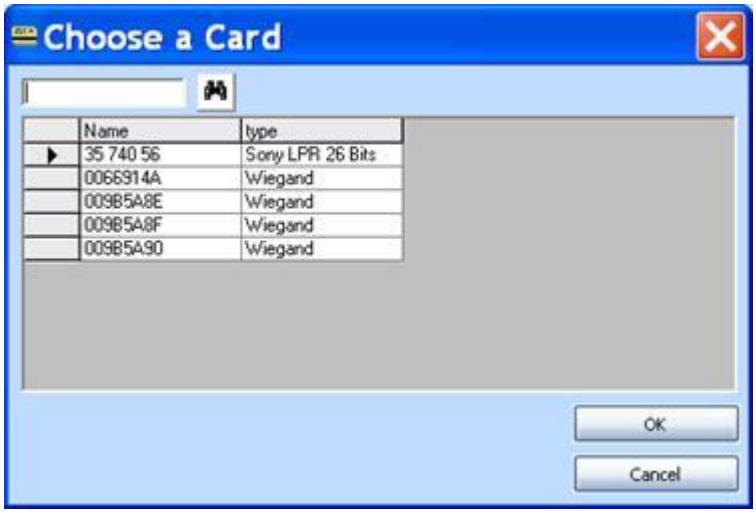
Note: Clicking the Delete button in the Cardholder screen is quite different than on the other screens: it will flag the Cardholder record as deleted and perform the following actions:

- The badge is returned to the non-allocated badges list
- It is removed from the controllers' memory and therefore cannot be used for access any longer
- The Validated checkbox is unchecked
- The record disappears from the Cardholder screen, unless the "Show deleted" box is checked

Records can only be permanently removed from the system using the Delete Tab in the *Create a Group of Badges* screen

3.11.1.1 CHOOSE A CARD SCREEN

When the 'Allocate' button is pressed in the Badge section of the Cardholder Screen, a window opens showing all the currently available badges (i.e. in the Badge database, but not currently allocated).



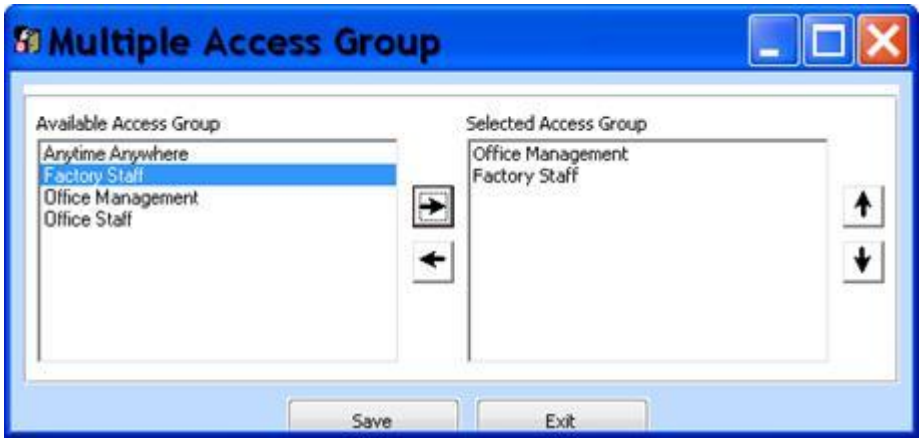
After selecting a badge and clicking OK, the system returns to the Cardholder screen, with the details of the selected badge in the badge section.

Note:

If a 'non-allocated' card (i.e., card with 'free' status in the database) is passed (read) whilst this screen is open, then that card is automatically selected from the list of free cards. Thus the user does not need to search through all unallocated cards.

3.11.1.2 <MULTIPLE> ACCESS GROUPS

The **Multiple Access Groups**screen allows *individual cardholders* to be assigned multiple Access Groups if those cardholders' access rules can be covered by a combination of existing AGs, rather than having to create a new complex AG as would be done if many cardholders require such rules. The screen is accessed by selecting the **<Multiple>** option from the Access Group dropdown in the **Cardholder/General** screen, and then clicking **[...]**.



Available Access Group

List of all AGs

Selected Access Group

AGs to be associated with this cardholder

Arrows →←

Select an AG, use the horizontal arrows to add or remove the AG from the 'Selected Access Group' column

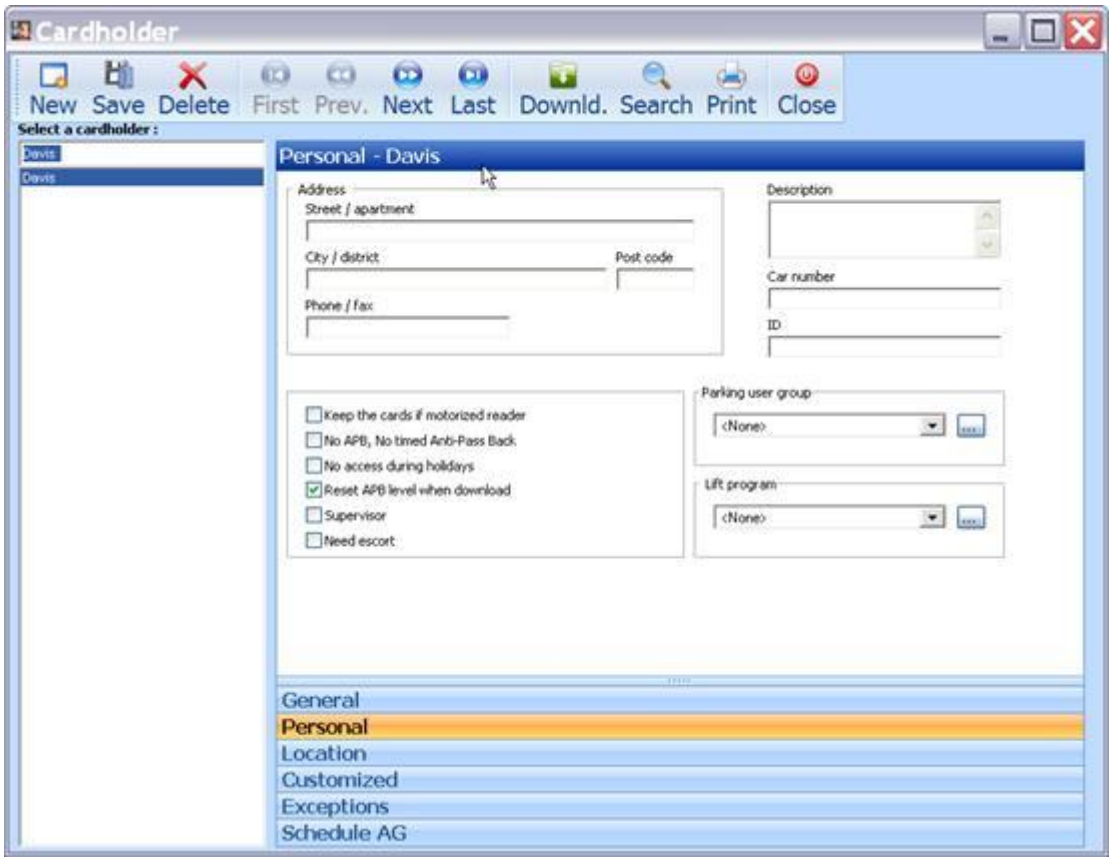
Arrows ↓↑

Select an AG, use the vertical arrows to change the sequence in the 'Selected Access Group' column

Note on sequence of AGs in the Selected AG column: Access Group times for each door will be applied as set in the relevant AG. As the cardholder presents his badge at a particular door, then if that door is included in more than one of the AGs in the 'Selected' list, then the rule for that door in the first AG that contains it (highest in the list), will be applied.

3.11.2 CARDHOLDERS/PERSONAL TAB

Allows Personal details to be stored about the Cardholder.



Address

Free text

Street/Apartment

Free text

City/District

Free text

Post Code

Free text

Phone/Fax

Free text

Keep the card if motorized reader

Check if card to be retained on exit at Motorized reader/s

No APB, No timed Anti-PassBack

Check if these restrictions are not to be applied to this cardholder

No access during holidays

Check if access only allowed on working days

Reset APB when downloaded

Check if APB to be reset for this cardholder when Controllers are downloaded.

Note: This gives the Cardholder one access 'free' of APB checking. This allows re-synchronizing the APB level of the cardholder, when Global Anti-Passback is requested. The next access granted at any reader will update his APB level from this reader so that he can start a new APB sequence from this level.

Supervisor

Check this box if this cardholder has the status 'Supervisor' – This status will give him the following capabilities:

- Can escort a cardholder whose status is set to 'Need Escort'
- Can create a transaction with code 99 by presenting his card twice consecutively at a single reader, within 15 seconds. If a Global Reflex is triggered by this code, it will be executed.
- Can perform specific functions from readers equipped with keypad or DDS terminals. Examples: Arm or Disarm alarm groups, etc.

Need escort

Check this box if this cardholder must be accompanied by a 'Supervisor'. The escort function is enforced at all readers which have been designated as 'Escort' in the *Readers/Access Mode* screen.

Note: By checking both the 'Supervisor' and the 'Need Escort' parameters, a cardholder will be accepted without a second cardholder at a reader requiring 'escort'

Description

Free Text

Car registration No.

Free text

Note - Parking The cardholder's License No. is used by the Parking Module.

ID

Free text

Parking user group (only shown if Parking Module is used)

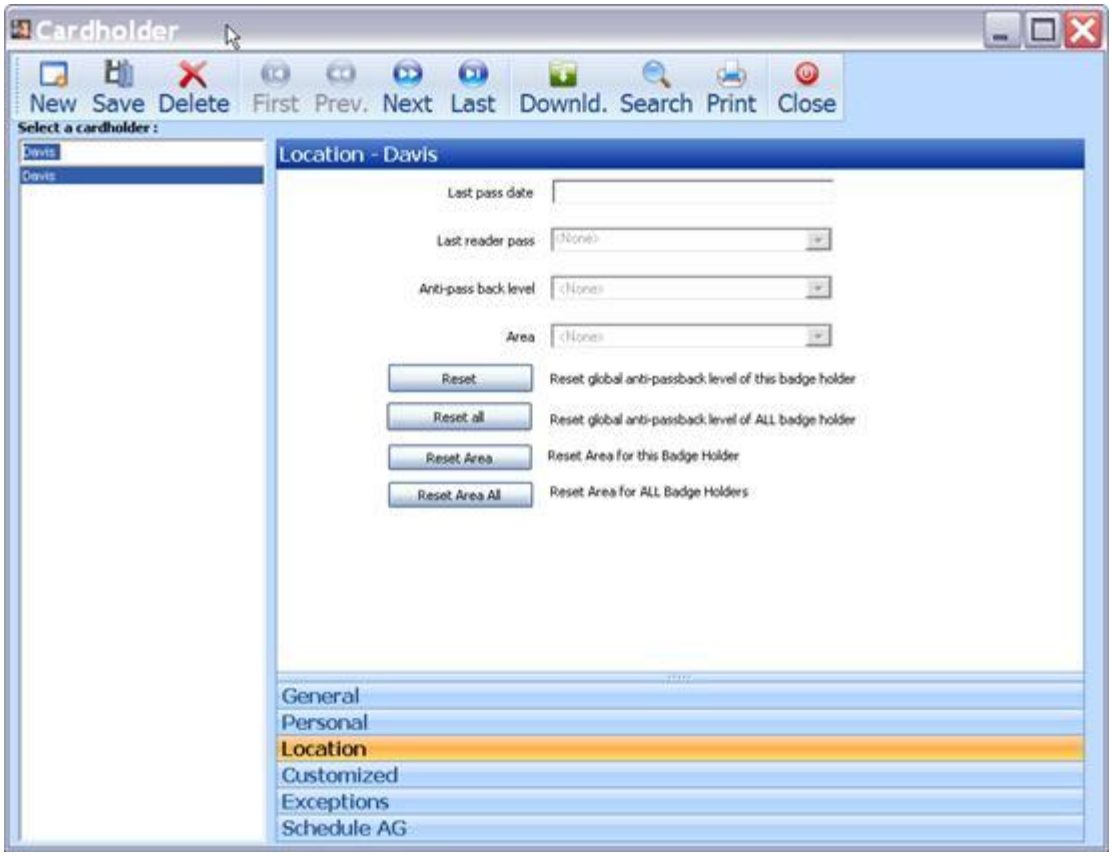
<none> is default. If Parking Module is installed, use dropdown to select applicable group.

Lift programme (only shown if Lift Module is used)

<none> is default. If the system controls lifts, use dropdown to select applicable programme.

3.11.3 CARDHOLDERS/LOCATION TAB

The Location facility allows a quick check on where a particular cardholder is, and allows that cardholder's location details to be reset if required.



Last pass date

Date and Time that this cardholder's badge was last read

Last reader pass

Reader at which the badge was read

Anti-Passback level

Current Anti-Passback level for this cardholder

Area

Current area for this cardholder

Reset button

Gives the Cardholder one access 'free' of APB checking. This is used to re-synchronize the APB level of the cardholder, when Global Anti-Passback is requested. The next access granted at any reader will update his APB level from this reader so that he can start a new APB sequence from this level.

Reset all button

Resets the Global Anti-Passback level for all cardholders

Reset Area button

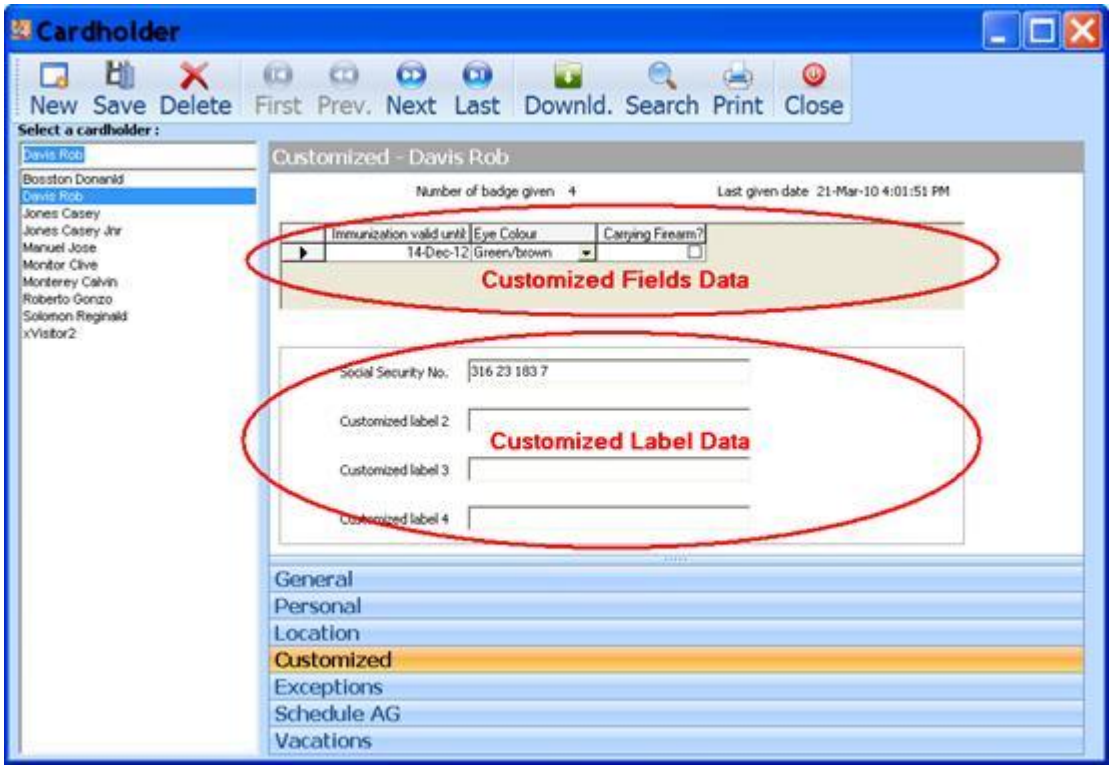
Resets the current Area for this cardholder to <none>. His current location will be updated by the next access granted at any reader.

Reset Area all button

Resets the current Area for all cardholders to <none>

3.11.4 CARDHOLDERS/CUSTOMIZED TAB

This screen presents the badge issue number and date and time of issue for the cardholder's current badge.



Number of badge given

Shows the 'issue number' of the cardholder's current badge (i.e. original badge will show as 1, each subsequent badge issued will increment the number)

Last given date

Shows date and time that current badge was issued

Customized Fields Area

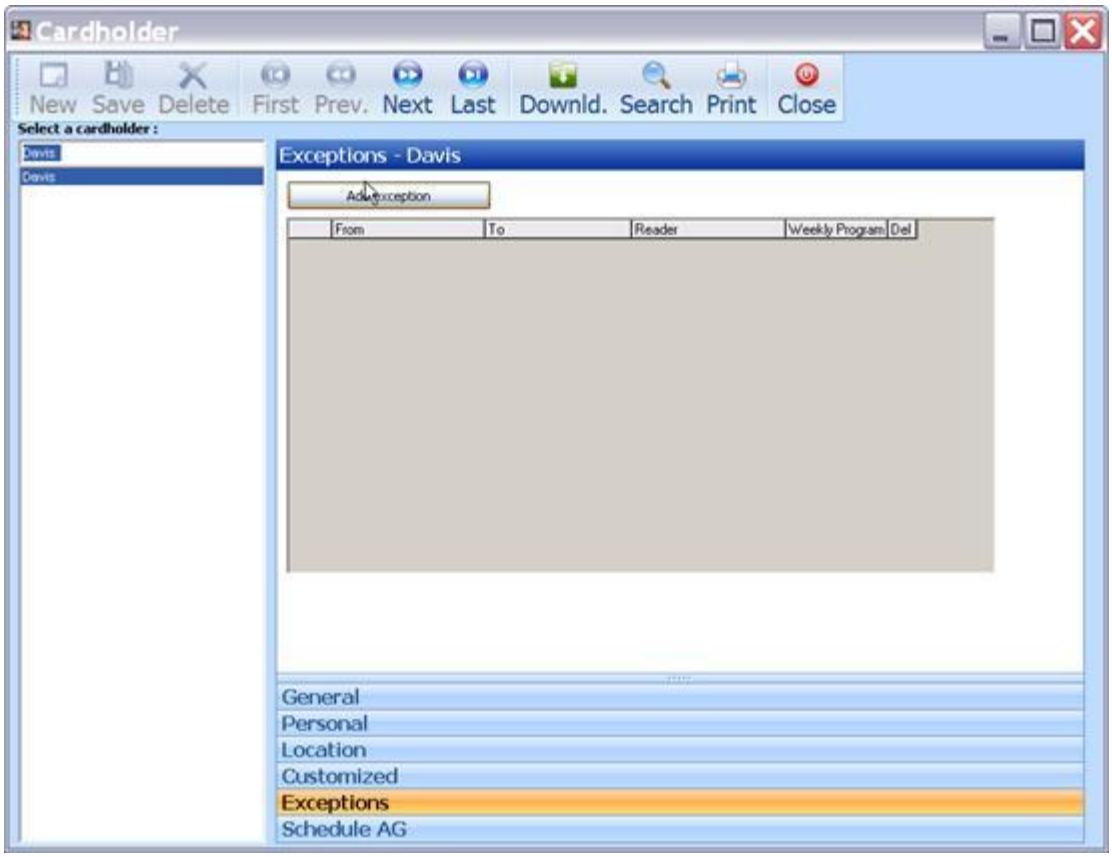
Area displays current contents of user-defined formatted data fields for this cardholder and allows data entry. (Fields are defined in *Customized Fields* screen)

Customized Labels Area

Four lines display current contents of user-labelled free text fields for this cardholder and allow data entry. (Labels are defined in *Customized Labels*screen)

3.11.5 CARDHOLDERS/EXCEPTIONS TAB

This screen allows the user to allow or prevent access by the cardholder at one (or more) doors during pre-defined periods.



Select the cardholder whose rules are to be changed

Add exception button

See *Add Exception* screen

Table of exceptions

List of all exceptions currently stored for this Cardholder

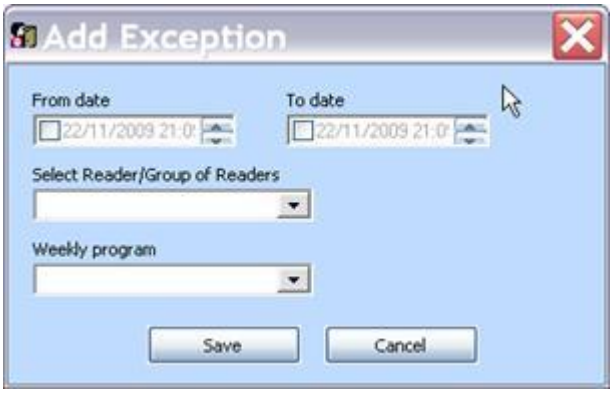
Del

Clicking on the X allows the selected Exception to be deleted

3.11.5.1 ADD EXCEPTIONS SCREEN

Add exception button

Opens *Add Exception* screen



From and To date

Set the Start and End times and dates for the Exception.
Each field in the time and date can be selected with the mouse, and then adjusted with the up and down arrows
Note: If no Start and End dates and times are set, then this Exception will be put into effect immediately (i.e. at the next cardholder validation period), and stay in effect until deleted.

Select Reader/Group of readers

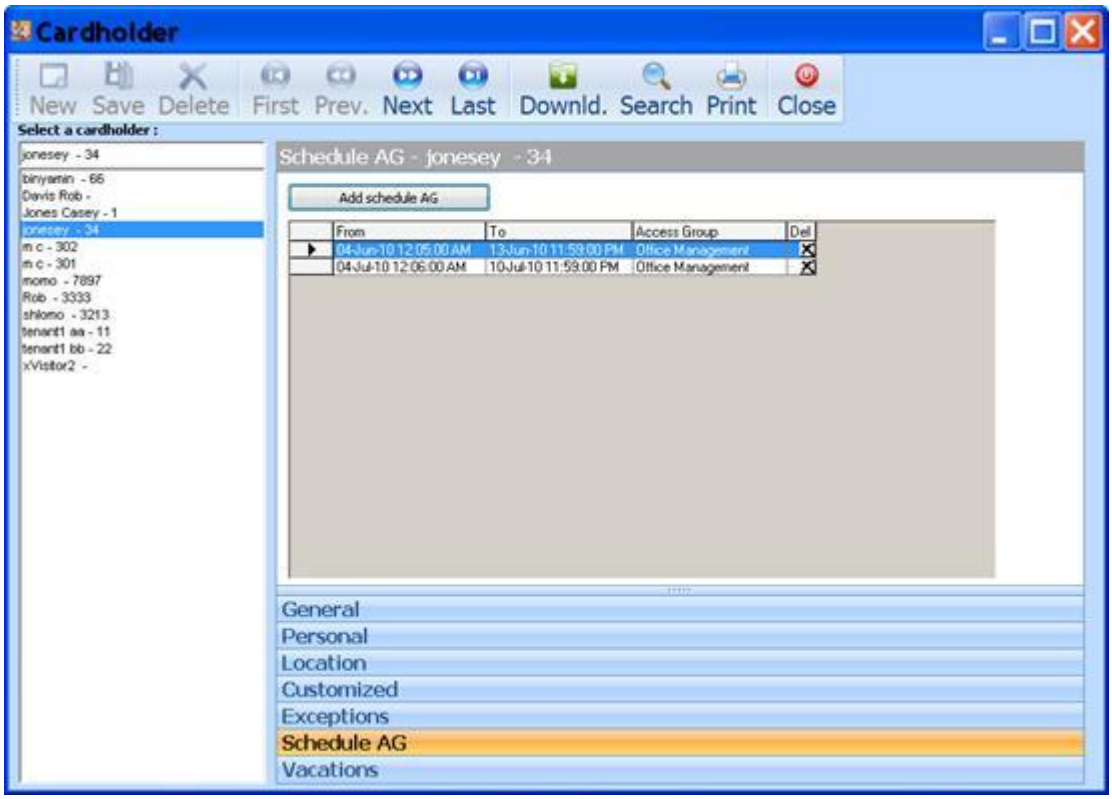
Select a reader or a group of readers (by selecting the Access Group they belong to) at which the Exception must be applied

Weekly Program

Select the Weekly Programme to be applied at the selected reader(s) for the duration of the Exception

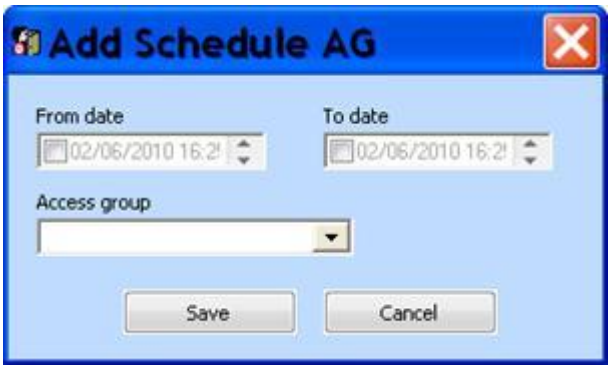
3.11.6 CARDHOLDERS/SCHEDULE AG TAB

This screen allows the cardholder to be assigned alternative Access Groups that will override their regular AG setting between specified dates. For each access during these periods, the cardholders regular AG is replaced by the scheduled AG specified here.



Add Schedule AG

Opens a window to define the start and end of a new Scheduled AG, and its applicable Access Group



From and To date

Set Start and End times and dates for the scheduled AG.

Each field in the time and date can be selected with the mouse, and then adjusted with the up and down arrows

Note: If no Start and End dates and times are set, then this Scheduled AG will be put into effect immediately (i.e. at the next cardholder validation period), and stay in effect until deleted.

Access group

Use the dropdown to open a list of all existing AGs, and select the applicable AG

Table of schedule AGs

Shows all Scheduled AGs for the selected cardholder.

Any entry can be deleted by selecting the row (►) and clicking on the Delete symbol (×).

A single entry showing no Start and End info means that an ongoing temporary AG has been assigned to the cardholder. No other entries will be accepted until this entry is deleted.

Note: These temporary alternative Access Groups definitions are entirely dependent on the PC running the system – they are not implemented by the controllers.

In the *Tools/Options/Communications* screen, the setting 'Check validation of cardholders every …Min' allows the user to specify how often should scan the DB for any special settings that apply to individual badges, like these temporary AG's. Upon finding that the status of a badge needs to be changed, the system will then send appropriate messages to all controllers to update the status of such badges.

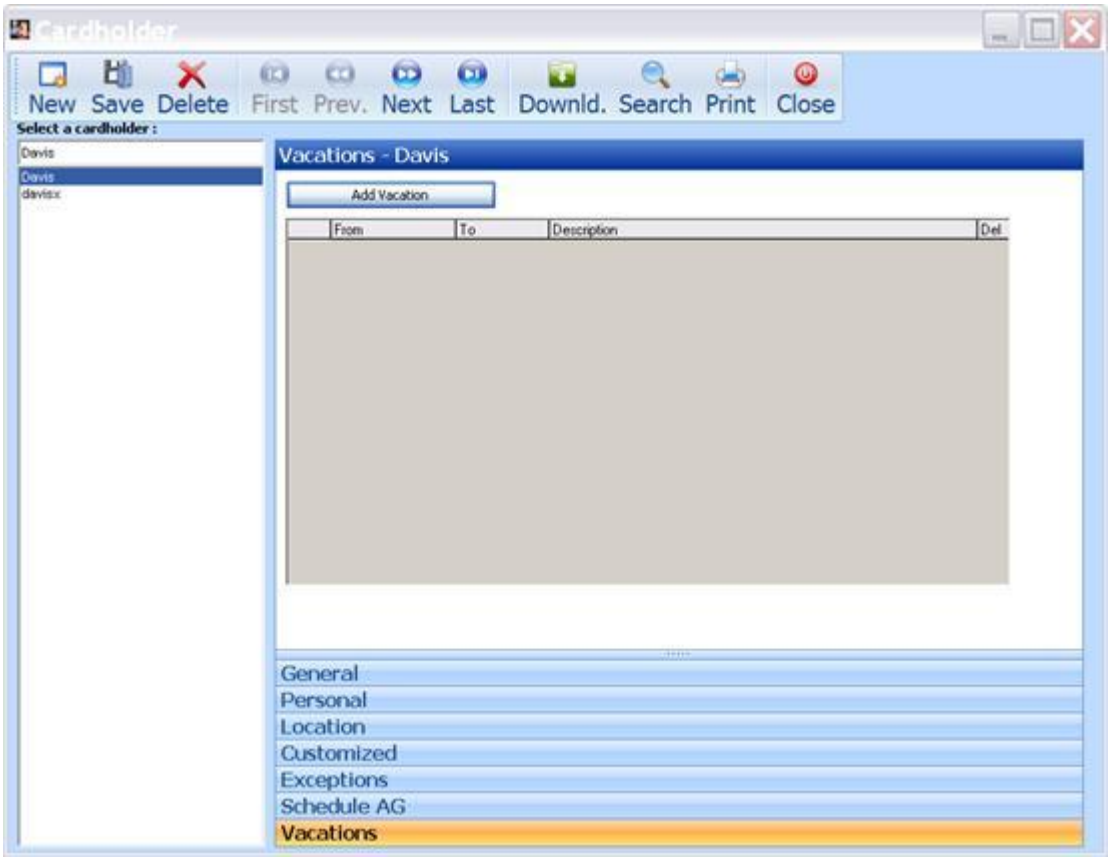
This option only sets the interval between scans – Thus in order to be sure that controllers are updated in time, the user must allow the update to be sent enough time before the requested change.

For example, if updates are to be sent every 30 minutes, and a Scheduled AG must come into effect at (say) at 8.00, then the 'From' time of the Scheduled AG should be set at 7.30 so that the scanning will definitely occur between 7.30 and 8.00.

3.11.7 CARDHOLDERS/VACATIONS TAB

.ini File and Dongle Setting The Vacations screen is shown only when the T+ Time and Attendance Option is in use.

A Cardholder will not be shown as absent on T+ T&A reports if a vacation has been recorded for that cardholder.



Add Vacation

Opens a window to define the start and end of a vacation for the selected cardholder

From and To date

Set the Start and End times and dates for the vacation.

Each field in the time and date can be selected with the mouse, and then adjusted with the up and down arrows

Desc

Free Text

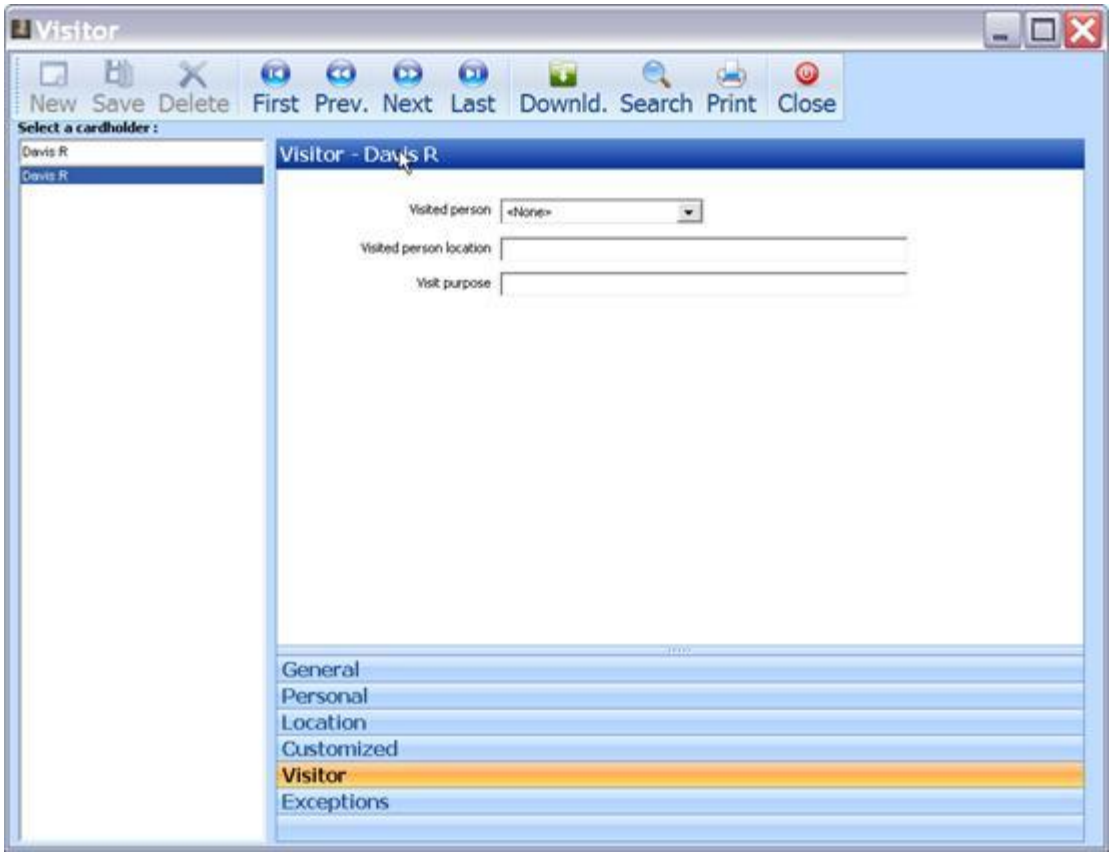
Table of vacations

Shows all vacations scheduled for the selected cardholder.
Any entry can be deleted by selecting the row (►) and clicking on the Delete symbol (×).

3.11.8 CARDHOLDERS/VISITOR TAB

The Visitors tab allows the operator to add visitor information.

Note: This tab is only shown and can only be selected from the Cardholders/General Tab if the cardholder selected in the Navigation pane is type 'Visitor'.



Visited person

Default <none>. To record who the Visitor intends to visit, use dropdown to select a cardholder from the full list.

Visited Person Location

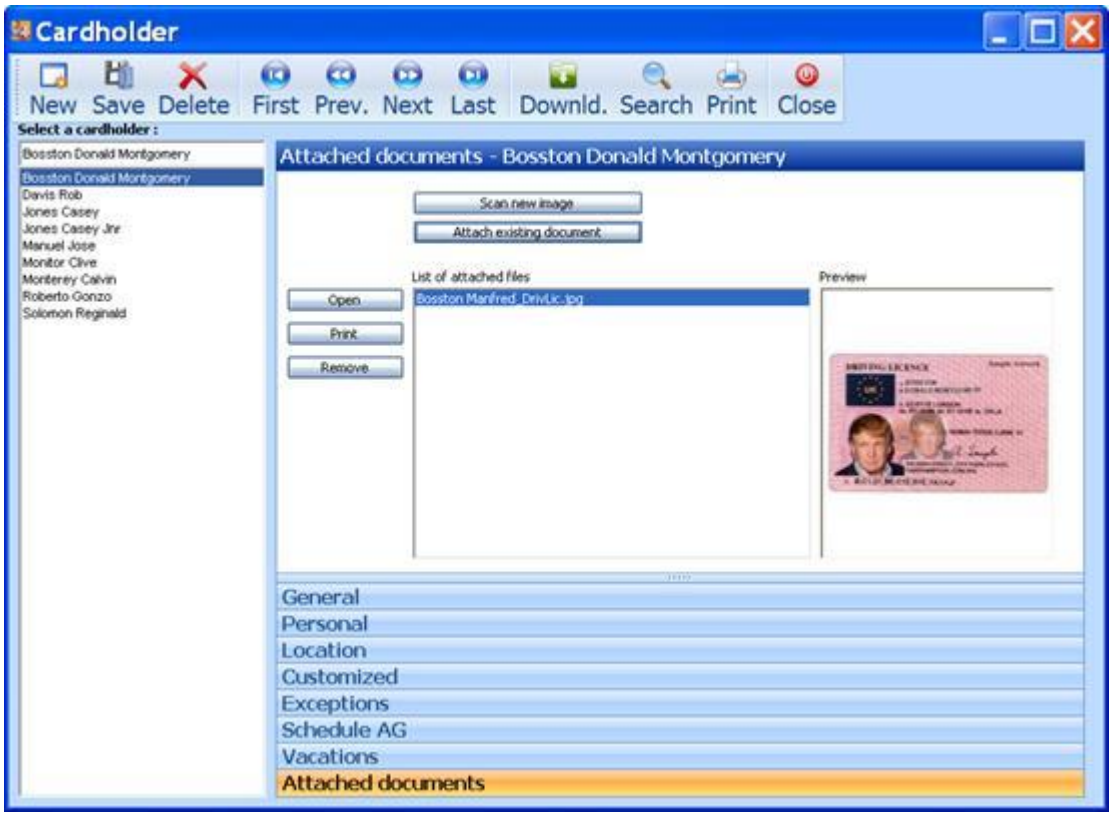
Free text

Visit purpose

Free text

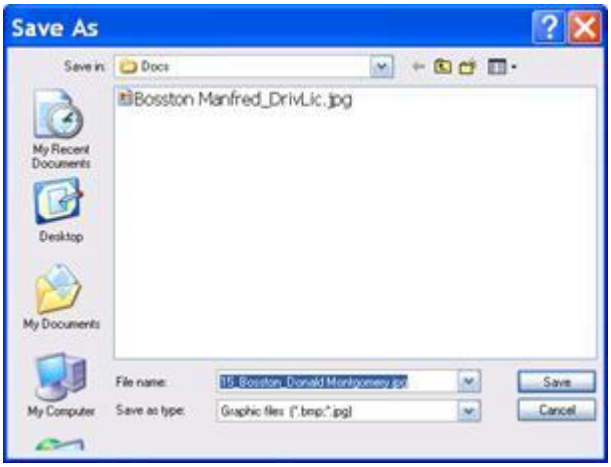
3.11.9 CARDHOLDERS/ATTACHED DOCUMENTSTOPICALIAS

This screen allows images of scanned documents to be associated with specific Cardholders.



Scan New Image / Attach Existing Document

Opens a window allowing the user to name the image to be scanned or to give the location where an existing image may be found.



In either case (new or previously stored image), a copy of the resulting file is stored in the application directory /Media/Docs

List of attached Files

A list of any files already associated with the employee highlighted in the navigation window is displayed.

The following actions are available:

Open / Print

Opens the selected image in a regular Windows Picture and Fax Viewer window, for viewing and/or printing.

Remove

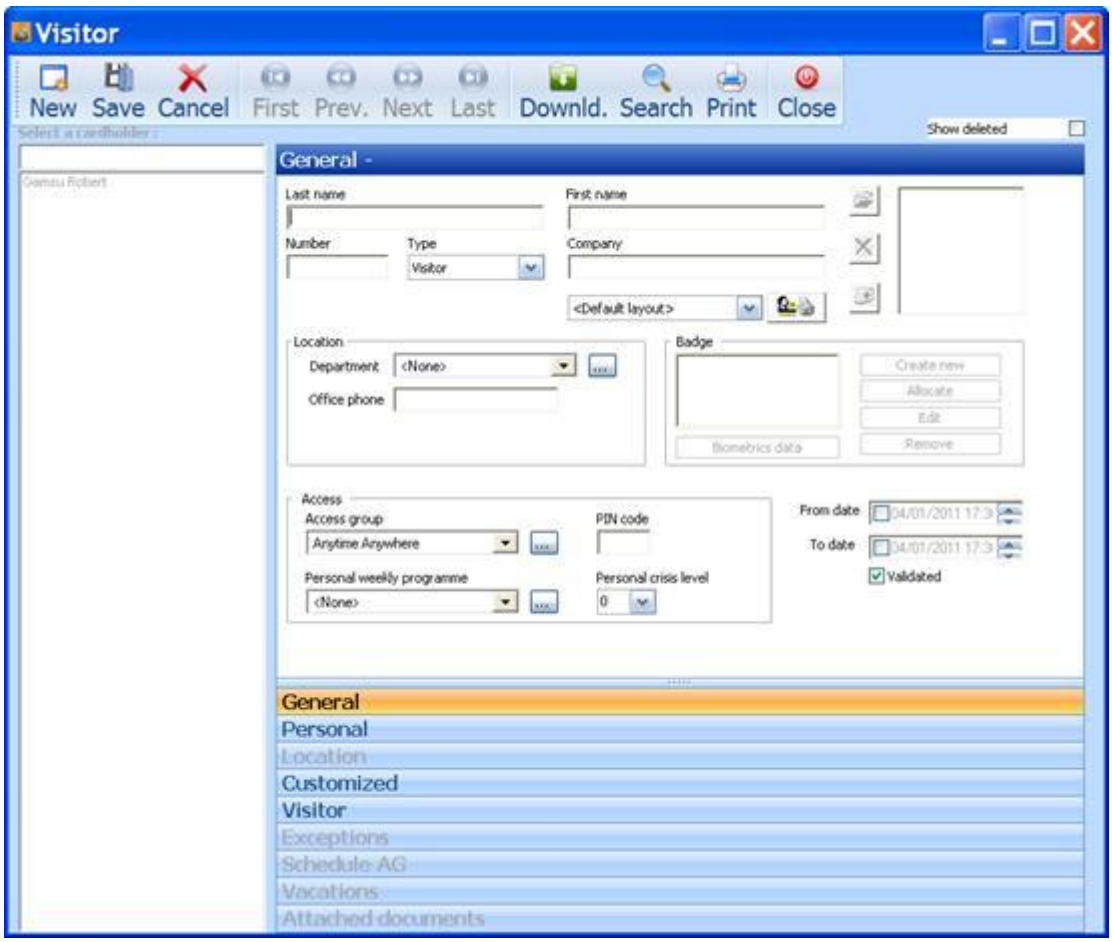
Remove the selected file. The user has the option to simply remove the file from the cardholder's record, or to additionally delete it from the disk

Caution: Clicking the 'Remove' button **will always** remove the association of the document from the Cardholder record. There is no 'confirmation' of this action. Thus if the button is clicked in error, then the file must be re-associated using the 'Attach existing document' button.

3.12 VISITOR

The Visitor screen is used to create new Visitor records and update Visitor information. It uses the normal Cardholder screen layout, but the type 'Visitor' is pre-selected.

> Note: By using the Authorization Level screen a user can be set up with permission to access the Visitor screen and not the regular Cardholder screen. Such a user can define and update Visitor records, without being able to access other cardholders' records.



For a new Visitor, the screen allows only the General, Personal, Customized and Visitor tabs to be accessed. Once the new record has been Saved, all normal Cardholder tabs are accessible for Visitors except for Location, Exceptions, Schedule AG (and Vacations, if T&A+ installed). An additional tab, *Visitor* is available. Follow the link to see details.

Show deleted

Allows user to see information about older Visitors Badges even after they have been set to 'Deleted'

Type

Visitor is set as default

Access Group

Specific Access Group/s should be created for Visitors. If 'Anywhere Anytime' is used then unwanted permissions may be granted when new readers are added, or in recovery situations where Visitors are on site after a system restart.

A regular Access Group can only be used for Visitors if the 'Also for Visitor screen' box is checked in the Access Group definition. (See *Parameter/Access Group* screen)

From and To Date and Time

These may be used to ensure that Visitors badges are invalid outside of specific hours, as in the *Cardholder* Screen.

Note: Default Settings available for Visitors:

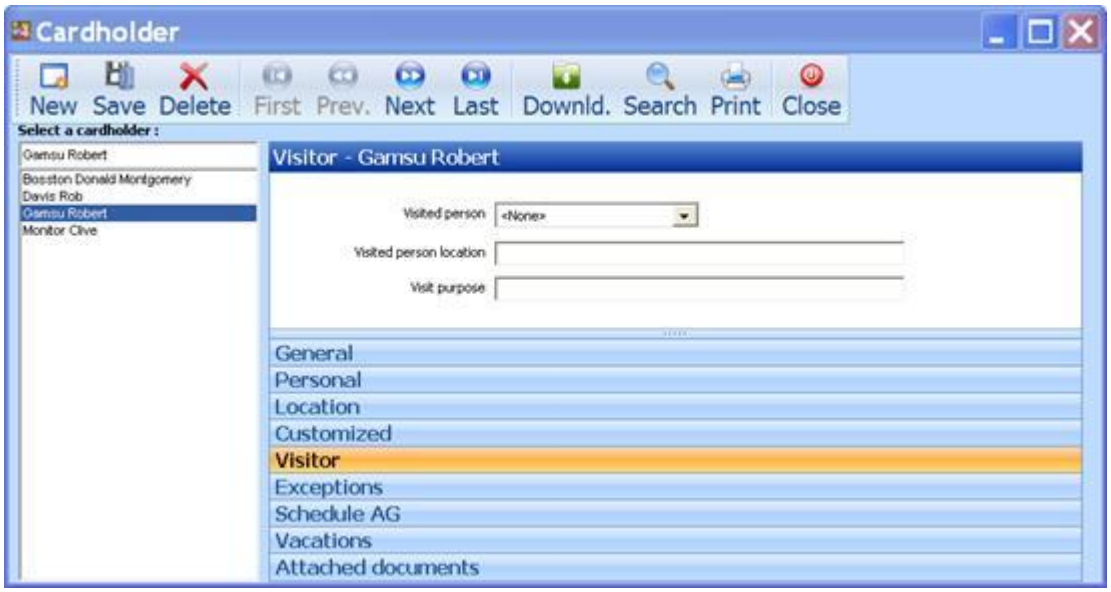
The following entries in the .ini file can be used to set up defaults for Visitors:

.ini section [Cardholder / Visitor]

AllowDuplicateName = 1	useful if user does not enter individual names for visitors
VisitorDefaultAccessGroup =	enter the name of the specific Access Group to be used
VisitorDefaultBadgePrintingLayout =	enter the name of the profile to be used for Visitor Badges
VisitorEndDay =	Setting a specific time here will automatically cancel the validity of **all** Visitors badges at this time every day.

3.12.1 CARDHOLDERS/VISITOR/VISITOR TAB

The Visitor/Visitor tab (which can be also be accessed from the Cardholder screen if the Cardholder type = 'Visitor' allows additional information about the Visitor to be captured.



Visited person

Dropdown – select the name of the person to be visited

Visited person location

Text field

Visit purpose

Text field

3.13 COMPANY

Note: This screen only appears in installations that include the multi-company option.

See *Company (Multi company option)*

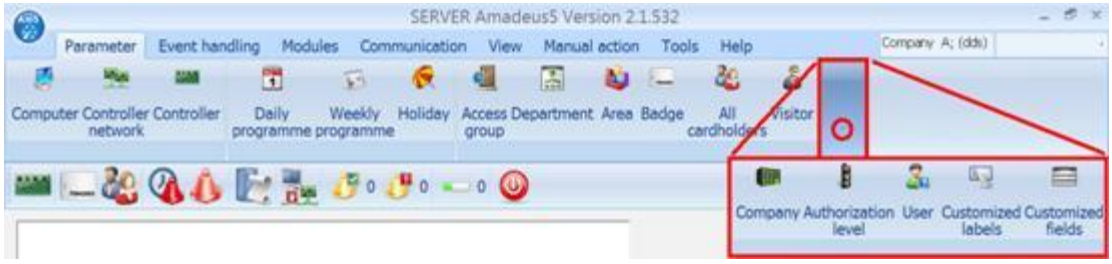
3.14 AUTHORIZATION LEVELS

An authorization level is a group of options and screens which can be 'viewed only' or 'viewed and modified' **only by users who belong to that level**.

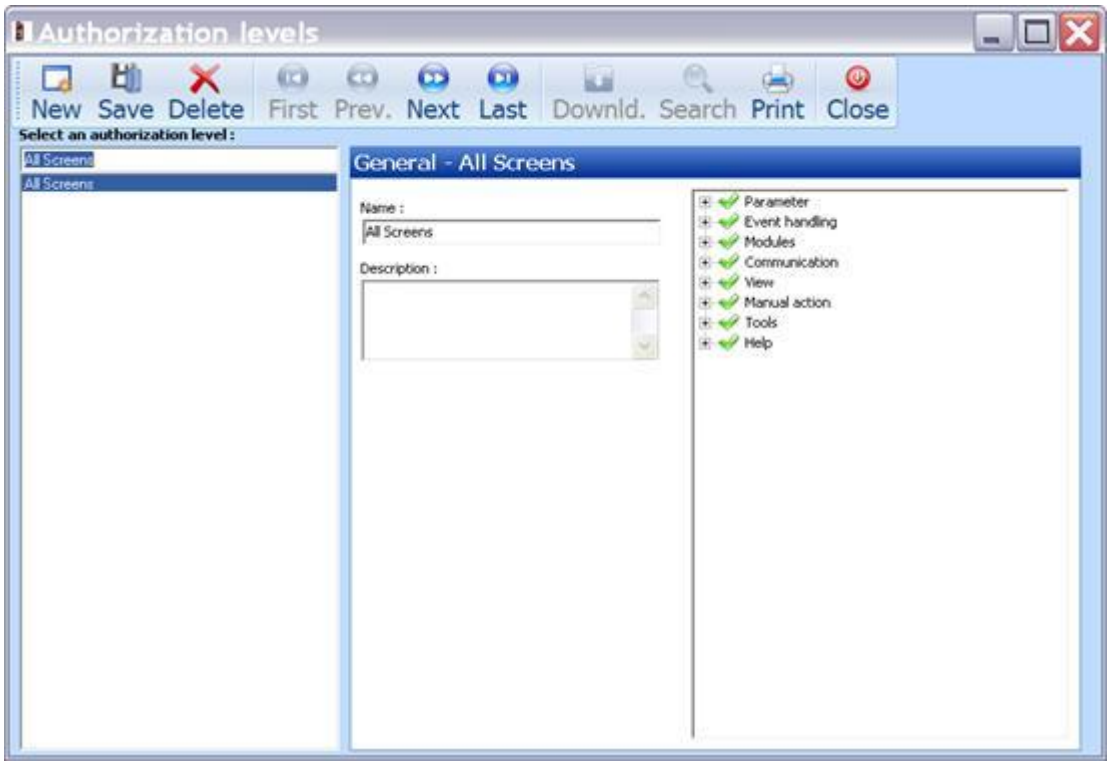
Examples

- The site manager has access to all the information
- The parking lot attendant can only view cardholder details and modify information regarding parking
- The receptionist at the entrance of the building can only create visitors' badges and view details of cardholders, to look up phone numbers and current location of the person beng visited

Once authorization levels are created using the Authorization Level screen, appropriate levels can be associated with any User who is being allocated a Username and Password in the *Parameter/User* screen.



Note on accessing this screen: Depending on the screen width, the RH group of icons of the menu ribbon may not appear, as they are minimized. In that case, a pull-down arrow (▼) is shown. Click the pull-down button to display the additional items.



A list of all Authorization Levels is shown.

When the screen is first opened, there is always a default Authorization Level set by the system called 'All Screens'. This Authorization Level's name can be changed, but its settings cannot be altered, and it cannot be deleted.
Clicking **New** allows a new Authorization Level to be defined.

Name

Free Text

Description

Free text

Authorization tree

The authorization tree for the selected profile is displayed, showing the authorization for all screens. There are 3 possible authorization values for each screen or tab, shown using the symbols:

- ✓ = full access allowed
- **R** = read-only access
- ✗= no access allowed.

Making a new Authorization level

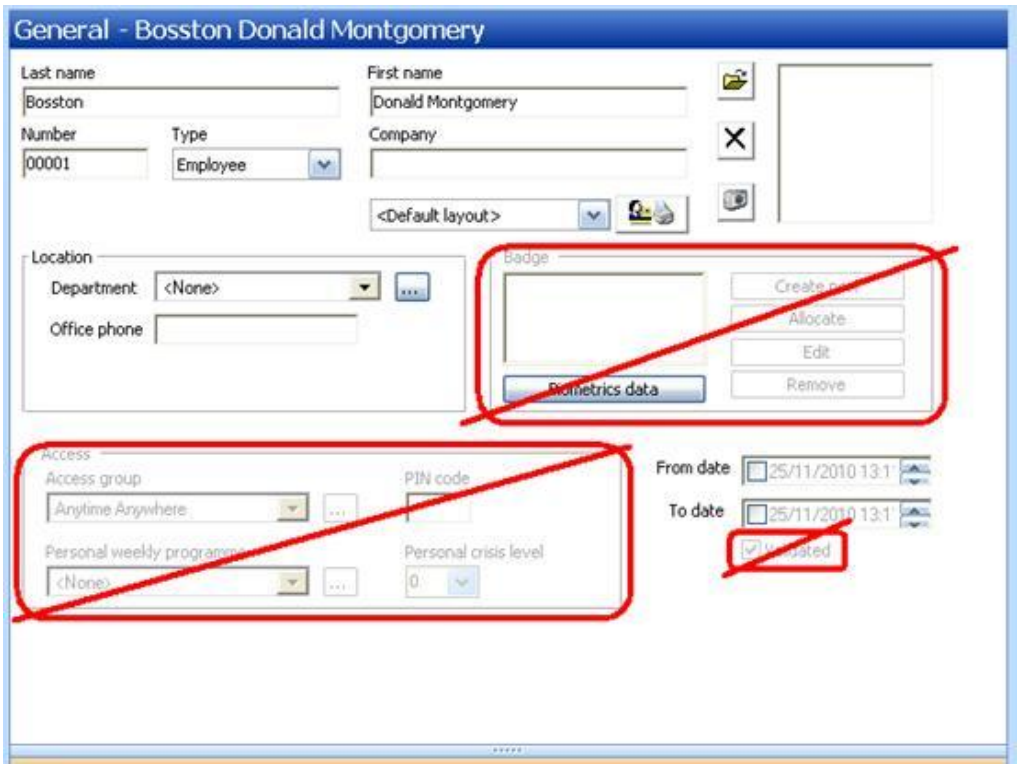
Clicking on **New** allows a new Authorization level to be created.
The tree of system screens is shown with all screens blocked except '**Parameter**', '**Log off**' and '**Exit**'. These are set to full access (✓**)** and cannot be changed. The user must then explicitly authorize each screen to which the members of this Authorization Level will have access, and whether the access is Read-only (**R**) or Full (✓).

Clicking on the authorization symbol for any screen allows permission to access that window to be cycled through the possible values.
If the authorization symbol for a tab (i.e. a higher level in the tree) is changed, the symbols for all screens in that tab will be changed to match it.
Clicking **Save** saves the new authorization level.

Note: Cardholder Access Rights

In the All Cardholders tab of the tree, the option "Cardholder access rights" may be selected to allow cardholders creation without giving access rights.

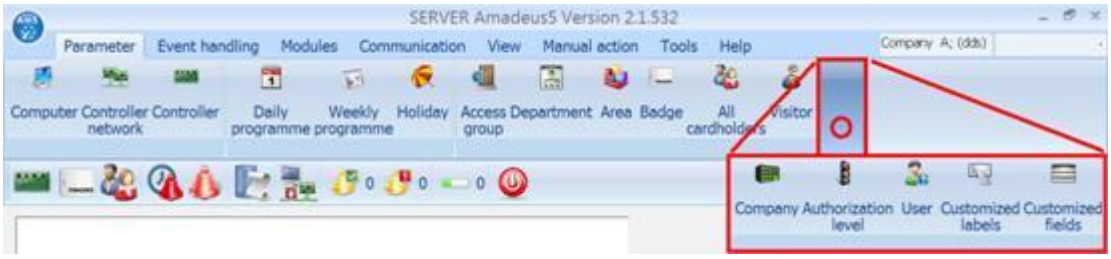
Such a user will, for example, be able to create new Cardholders and enter their personal information, but all fields defining the cardholder's access rights (and the badge information) will be greyed-out.



The same applies to the succeeding Cardholder tabs, such as **Personal** (i.e. address information may be entered, but not access parameters), etc.

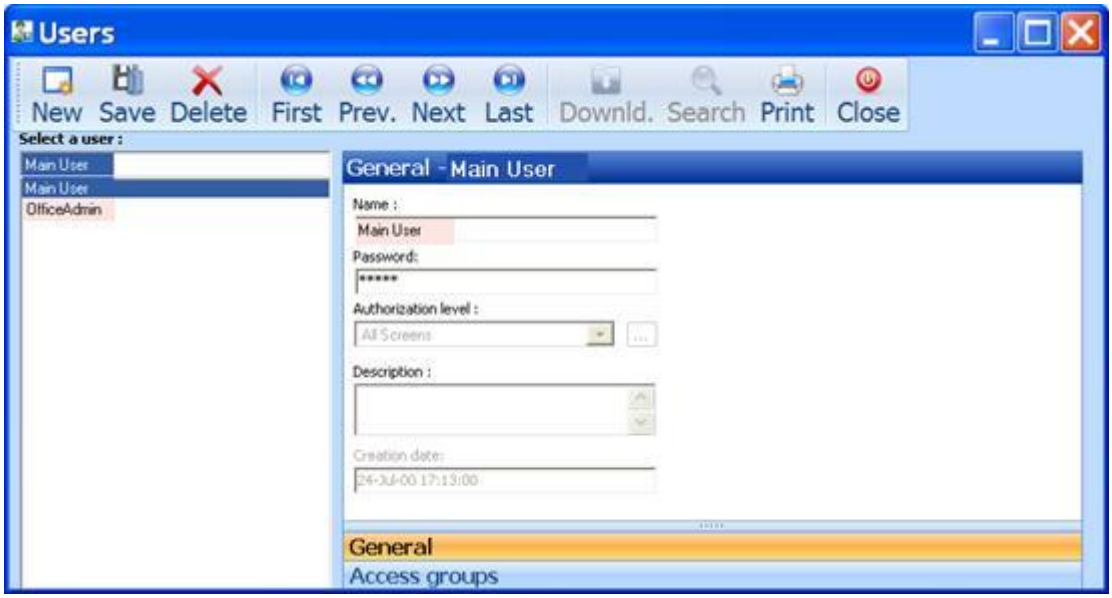
3.15 USER

This screen registers Users, giving them User Names and passwords, and associates them with authorization levels which control what parts of the system they can access.



Note on accessing this screen: Depending on the screen width, the RH group of icons of the menu ribbon may not appear, as they are minimized. In that case, a pull-down button (▼) is shown. Click the pull-down button to display the additional items.

This screen has additional functions when using the *Multi Company* and *Multi site* options. Follow the links to see details.



Note: The 'Access Groups' Tab will only be shown if the ini options *LimitUserAG* and *ForceMultipleAG* are set – see *User/Access Groups*

When the screen is first opened, there is always a default User set by the system (shown here as 'Main User'). This User's name can be changed, but will always have the Authorization Level 'All Screens' and cannot be deleted.
Press **New** to create a new User

Name

User Name

Password

Enter the password for the new User.
Passwords must be unique – no two users may share a password

Authorization Level

Use the dropdown to choose an authorization level to associate with this User.
Press […] to open the Authorization Level screen and create a new entry or modify an existing one.

Description

Free text

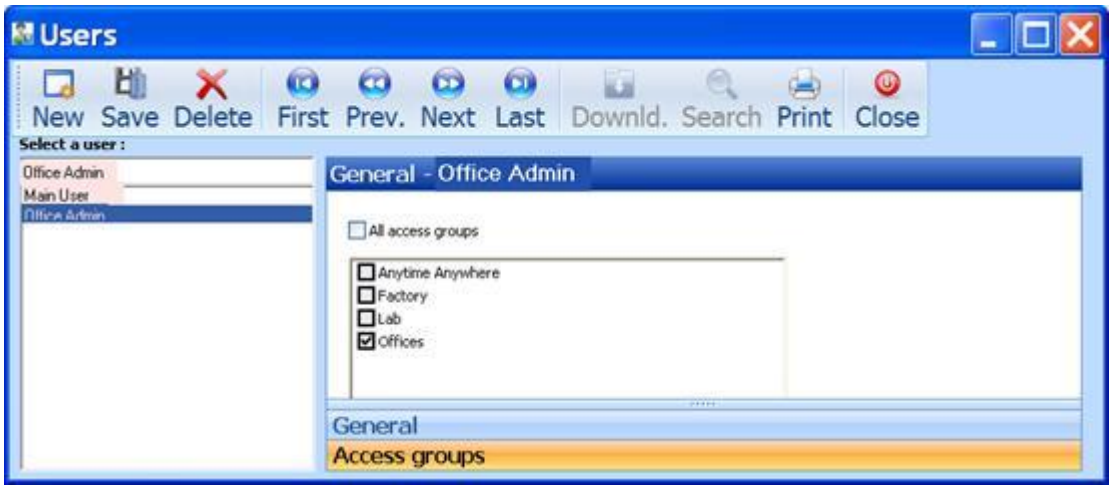
Creation Date

The system automatically completes this field

3.15.1 USER/ACCESS GROUPS

The system can limit certain Users' ability to add or update Access Groups. When this option is used, then as each new User is added, the access Groups to which they can access can be set.

Note:
To use this option, the ini options *LimitUserAG* and *ForceMultipleAG* must both be set.



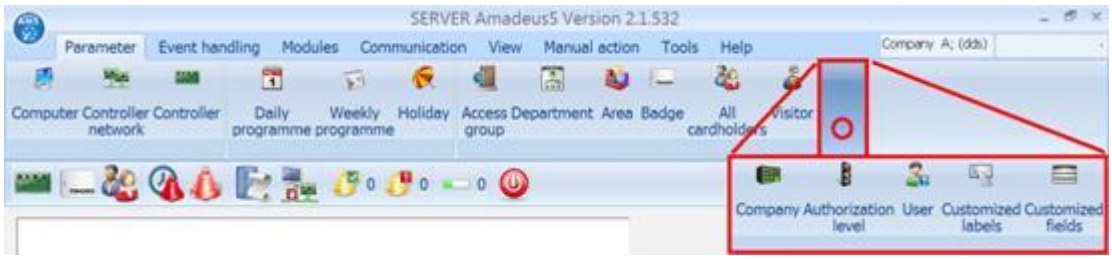
For each new User, the Main User can set which Access Groups the new user can use.

Note: When LimitUserAG is set, the check box 'Also for visitor' in the Access group screen is disabled, as the LimitUserAG option has higher priority.

3.16 CUSTOMIZED LABELS AND CUSTOMIZED FIELDS

The system's Cardholder screen and all its tabs allow users to record a lot of information on cardholders. However, each company has its own requirements and users may wish to add some customized information. This can be done in the *Cardholder/Customized* tab of the Cardholders screen, where users have two types of customized areas for storing information in cardholder records:

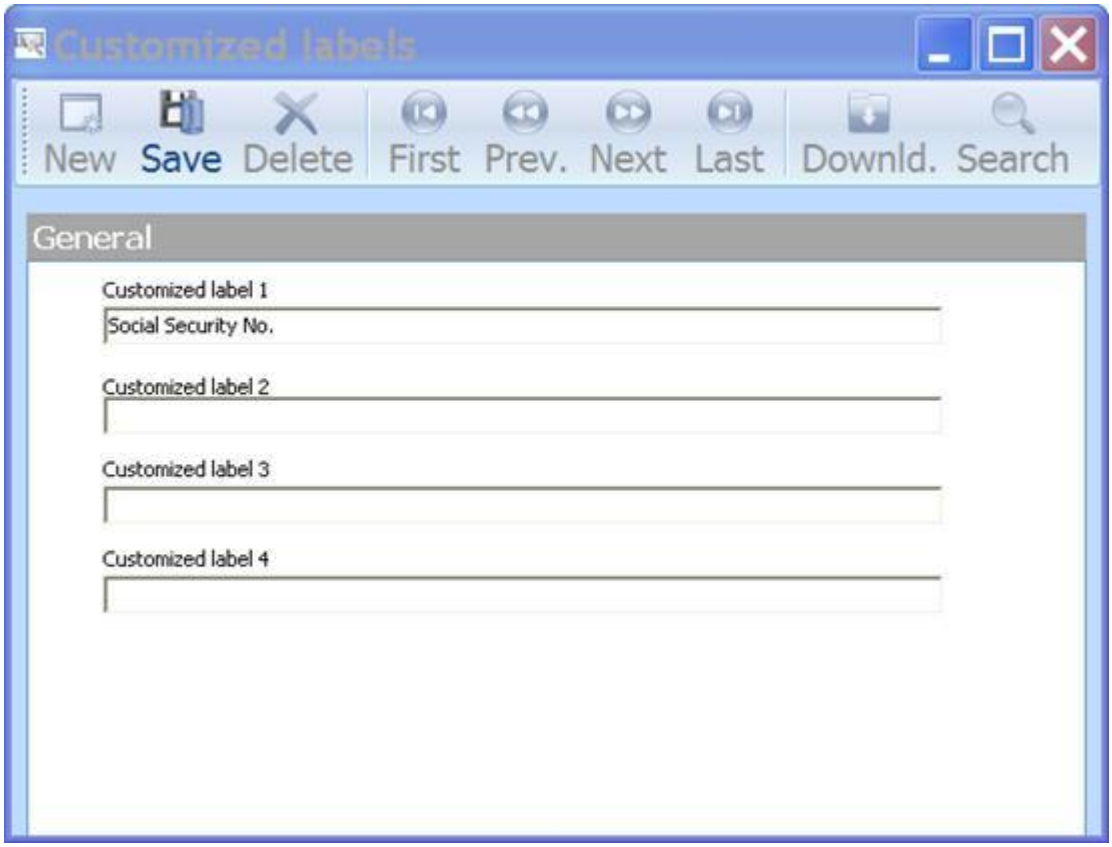
- *Customized Labels* – 4 **free-text** fields for which the user can customize the fieldname.
- *Customized fields* – additional **user-definable fields** for handling of information which can be checked/limited on entry.



Note on accessing this screen: Depending on the screen width, the RH group of icons of the menu ribbon may not appear, as they are minimized. In that case, a pull-down button (▼) is shown. Click the pull-down button to display the additional items.

3.16.1 CUSTOMIZED LABELS

Up to 4 free-text fields can be named to be used for User-defined data in the Cardholder/Customized screen.



Customized Labels 1 . . 4

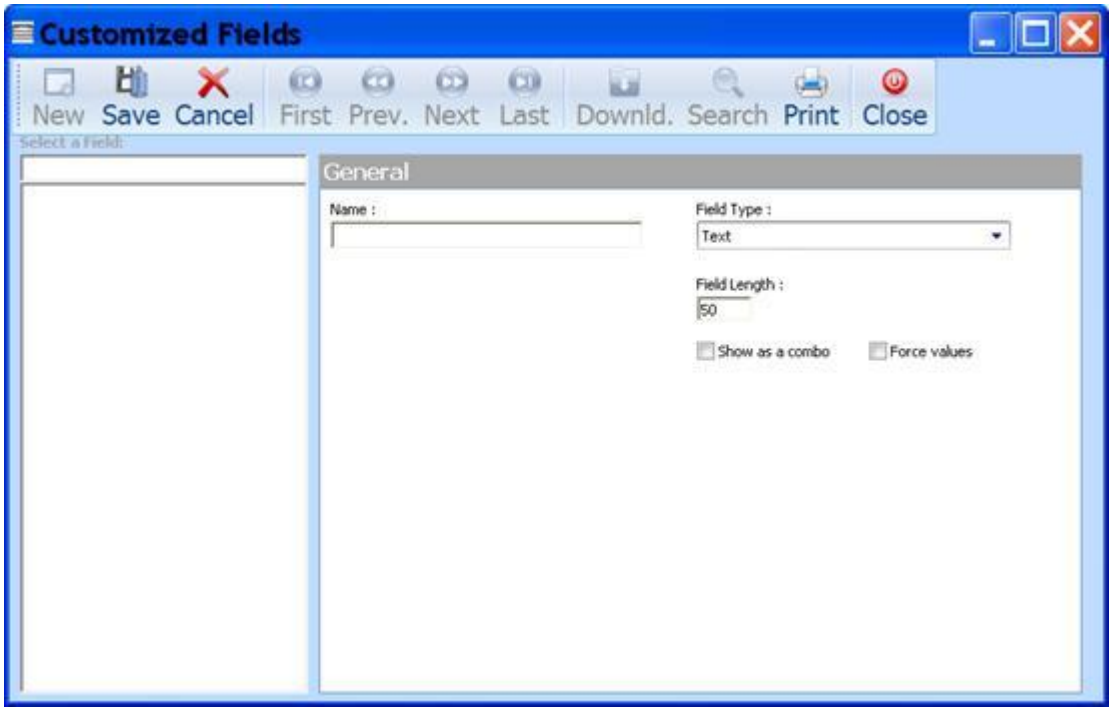
Enter the names to use for each of the Fields. In the *Cardholder/Customized* screen, instead of displaying 'Label 1', 'Label 2', . . etc, the screen will display the name set up by the User for that data field.

3.16.2 CUSTOMIZED FIELDS

3 different types of fields may be set up: Text, Date and Boolean.
Fields may be set up with specific data input rules regarding format and data type. They are therefore suitable for storing information that is of a specific type, or bounded by fixed rules.

See the examples in the *Cardholder/Customized* screen

Caution - Care must be taken when setting up customized fields, as once they are created, their definitions cannot be modified. The only way to change the definition of customized fields is to delete them and create new fields, but this means that any data already entered will be lost.



Select from the list of already-defined fields – the parameters for that field will be displayed. Parameters of existing fields cannot be modified.

To define a new field, press **New**.

Caution When a new field is defined and the operator presses **Save**, the application has to be restarted in order for the new definition to take effect.

Name

Free text

Field Type

Data types for a new customized field may be Text, Date, Boolean (Check box) or Number. Field defined as 'Text' or 'Number' may be displayed as a regular field or as a combo box field.

Examples of field types:

Text –

Field Length must be specified

Combo Box - if Comb Box is checked, then a 'values' box is shown in this screen, and a list of predefined values may be entered, separated by semi-colons (;). This list is presented when the Cardholder/Customized tab is accessed.
When the Combo box is checked, a **Force values** box appears: if checked, then ONLY the list of predefined values may be used; if not checked, the operator may then enter a different value

Values that will appear in the Combo Box

Date – If Date is selected, then when the Cardholder/Customized tab is opened, only a valid date may be entered in the corresponding field.
(Date format is as set in Windows for the computer running the application)

Boolean – If Boolean is selected, then when the Cardholder/Customized tab is opened, a checkbox is presented next to the corresponding field

Number - as for Text, but only numeric values are accepted.

4 EVENT HANDLING TAB

The Event Handling facilities allow programming, display, and management of alarms and user-defined processes. Inputs may be programmed to be active or inactive, and if active, are armed/disarmed according to user-defined time parameters. All events in the system can be handled through graphic representation: alarm inputs, output relays, processes and so on may be represented by icons/buttons. Icons may be positioned on maps and are automatically updated according to events as they occur. Processes may be activated automatically or triggered by the operator by clicking on their icons.

The system provides powerful facilities to prepare fully customized dynamic displays all inputs and outputs, so that monitoring staff can use site maps to visualize the entire installation, view the status of all Inputs, see responses at Outputs, and follow the activation of reflexes that are set up in the system.

There are 4 groups of Operator actions in the Event Handling Tab:

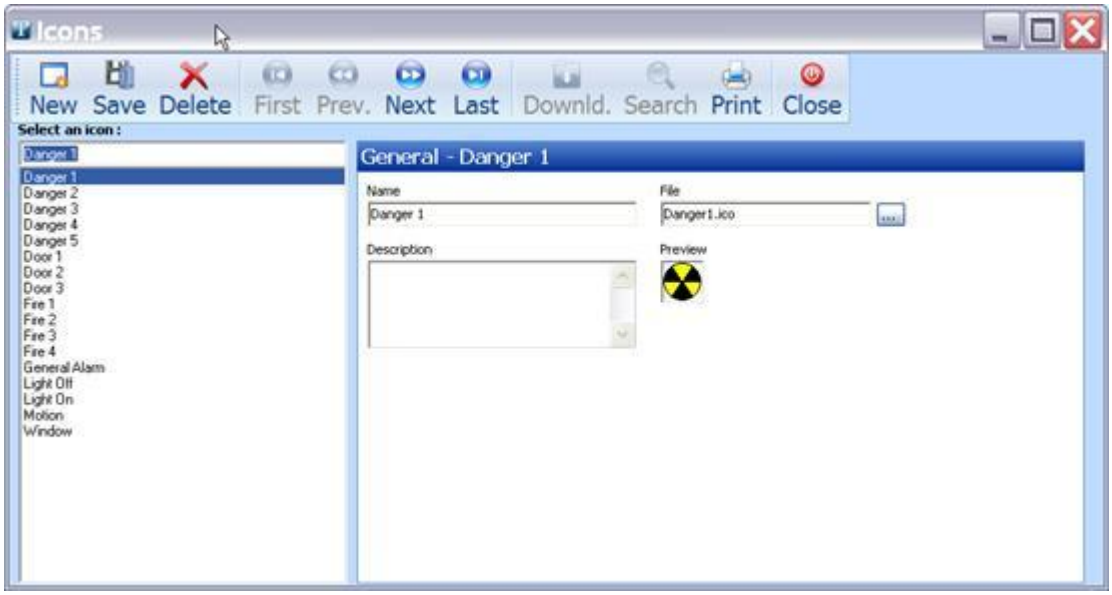
Display Setup	Alarm Grouping	Programming	Tracking
Icon	*Input Group*	*Action*	*Counter*
Map	*Output Group*	*Process*	
Position	*Event Handling Programme*	*Global Reflex*	
Active Alarms			

G+ Graphics Module Users may license additional graphics display capabilities.
These are described in the section *Graphics +Module*

4.1 ICON

Icons are graphical symbols that are assigned to *Inputs*, *Outputs*, *Actions*, and *Processes*. Icons are selected, positioned on maps and then used in the *Event Handling Active Alarms* screen.

The Icons screen displays the contents of the default Icons file in the directory .\Media\Icons. The user can assign names and descriptions, and can add and delete Icons from the file.



Name

Default name – can be edited

Description

Free text

File

Filename of selected icon.

Click [...] to access Icons in other files. An icon selected from another location may be copied into the default Icon file by pressing Save.

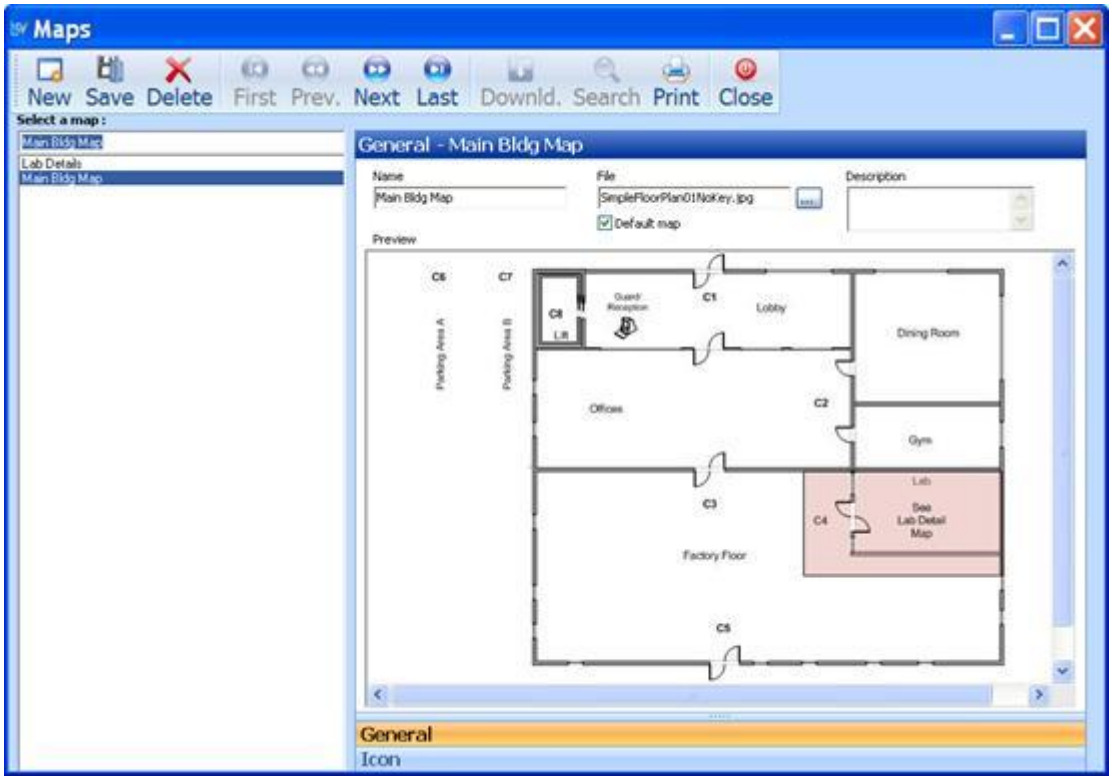
Preview

Shows selected icon

4.2 MAP

Maps are used by the Active Alarms function to display the location and status of Inputs and Outputs, and allow placement of clickable icons for Actions and Processes.

Maps are stored as graphics files in the default Maps folder in the application directory .\Media\Maps. The user may assign names and descriptions to maps, and add and delete maps from the directory.



Name

Name of selected map

File

Filename of selected map.

Click [...] to access map files in other directories. A map selected from another location will be copied into the default directory by pressing Save.

Default Map

Checking this box will set the selected map as the default map – i.e. it will be the first to be displayed when opening the Active Alarms screen or the Position screen.

Description

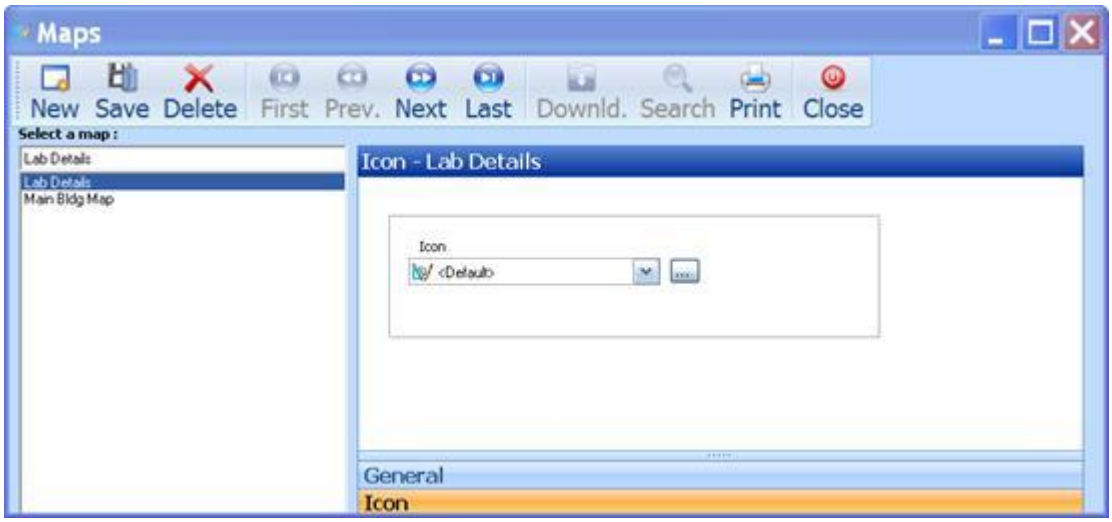
Free text

Preview

Shows a preview of the selected map

4.2.1 MAP/ICON TAB

Allows a specific Icon to be allocated to the current Map.

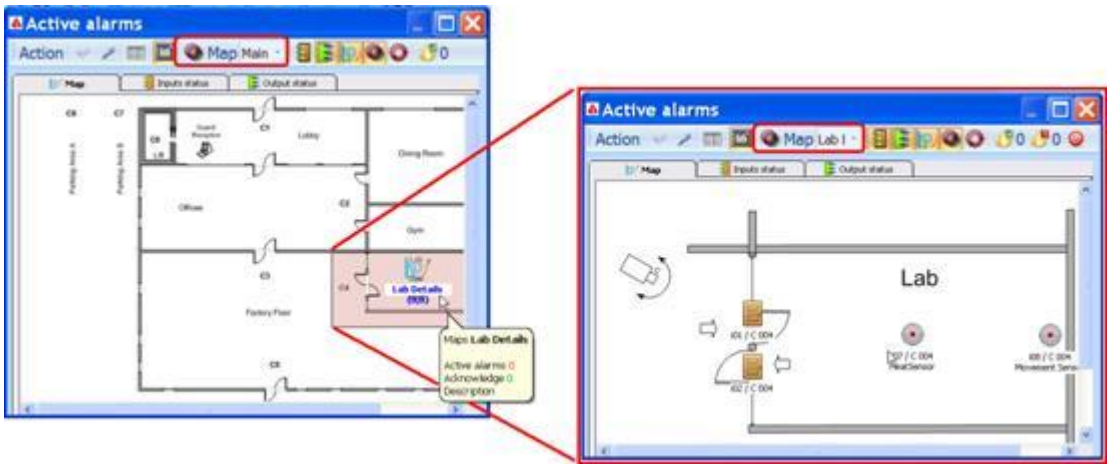


If an icon from an alternative source is selected using the […] button, then the selected icon will be added to the system's Icons file

Using Map icons

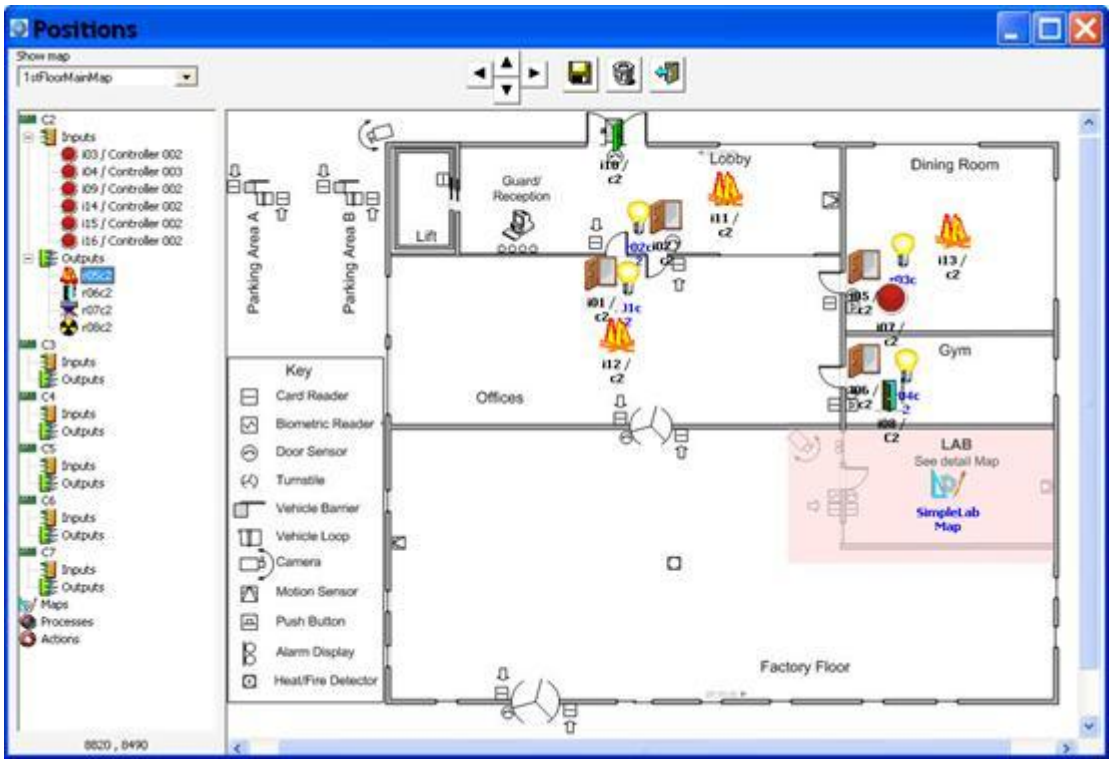
Several Levels of maps may be defined (i.e. an overall site map showing different buildings, more detailed maps of each building, different maps for each floor of multi-storey buildings, etc..)

For example, where multiple maps are used, the icon of a map showing an area in detail can be positioned on a more general map. Then, in the Active Alarms screen, while the general map is being displayed, the icon for the more detailed map can be shown (by toggling the Map button), and clicking on the icon of the detail map will change the display to show the more detailed map.



4.3 POSITIONTOPICALIAS

The Position function allows the user to place icons designating *Inputs*, *Outputs*, *Processes*, *Actions* (and also icons representing other maps) on Maps to be used by the *Active Alarms* function.



Show map

Dropdown allows the user to select which map to display and edit.

Navigation: The list of maps is alphabetic. Thus the 'Default Map' may not be the first map displayed in the Map or the Position screen. It will, however, be used by the 'Alarm Monitoring screen as its 'main' display.

Several Levels of maps may be defined (i.e. an overall site map showing different buildings, more detailed maps of each building, different maps for each floor of multi-storey buildings, etc.. However, an individual icon can only be associated with one map.

Navigation Pane

Shows a tree structure of Inputs, Outputs (by Controller), Maps, Processes and Actions. Upon opening the Position screen for the first time, each category can be expanded by clicking on it, and icons for all the items are displayed.
(e.g., all Inputs and/or Outputs for a selected Controller)
If the user has defined icons for the items in the relevant screens then the selected icons will be displayed.
As icons are dragged onto the map they are removed from the tree list.

Working with the screen

An icon can be selected by clicking on it. The name of the selected icon is highlighted in blue

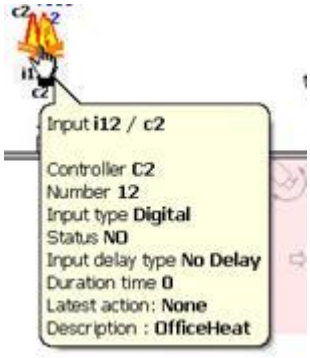
Arrow Buttons

◄ ▲ ▼ ►

Once an icon is placed on the map, clicking on the arrow icons allows fine-positioning of the icon on the map

Data about an Icon

The data that defines the icon is displayed by moving the mouse over the icon



Saving or deleting an Icon

Right-clicking on a selected Icon opens a sub-menu:

`Save`

`Delete`

`Open input screen`

Save the position of the icon

Delete the icon (the icon will be returned to the tree, and can be placed again later.)

Updating information about an Icon

Open . . Screen - Icons referring to Inputs and Outputs have an additional item in the submenu that opens the relevant data screen directly, allowing updates and changes to be made

Leaving the screen

Save Button 🖫

Click to save position for the last selected icon

Delete Button 🗑

Click to remove the last selected icon and return it to the list

When deleting: In some cases, the selected icon will remain on the screen after clicking on Delete. Upon closing and opening the screen, the icon will appear in the tree.

Exit Button

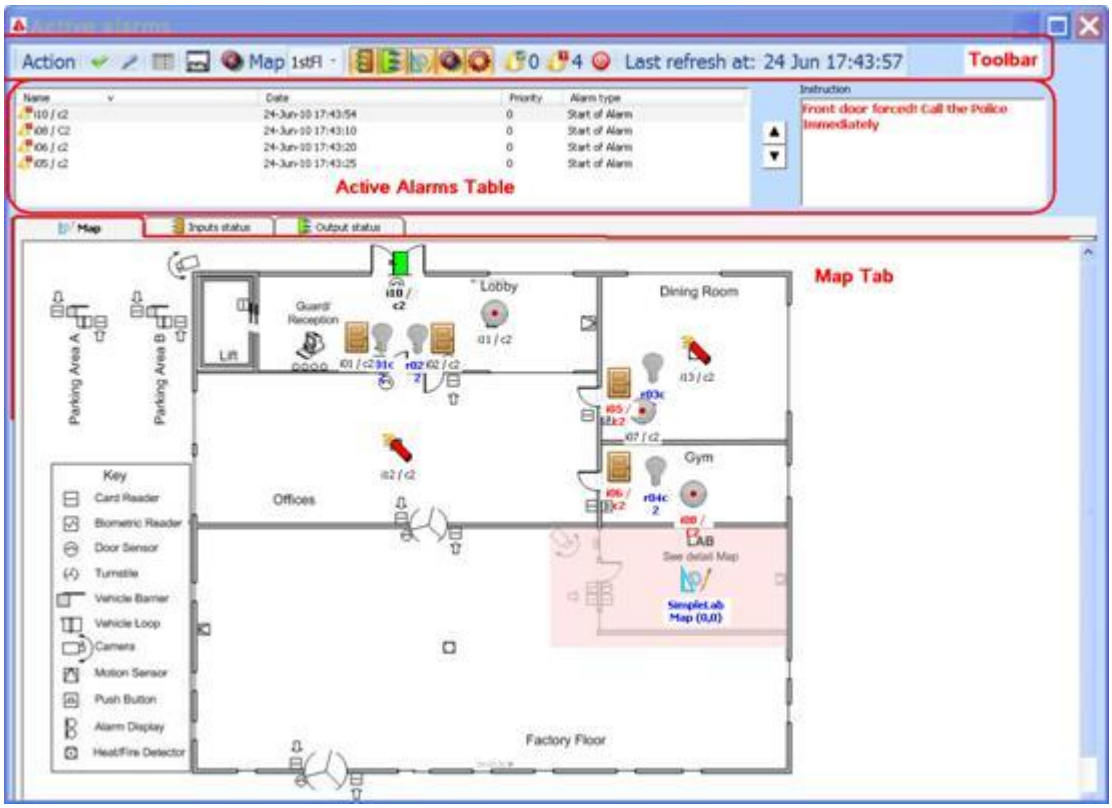
Click to exit from the Position function

Notes:

1. Each item can only be placed once on the map (and only on one map).

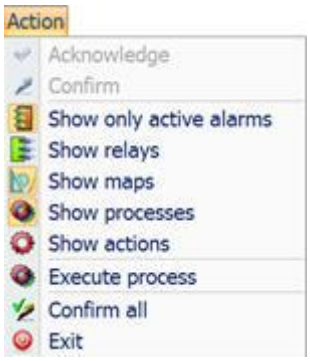
4.4 ACTIVE ALARMS

The Active Alarms screen provides a centralized Alarm Management facility, graphically presenting inputs, relays and alarms status on site maps. Actions and processes can be triggered by clicking on icons.



Active Alarms Toolbar

1 Action Dropdown Menu



See descriptions below for Action Menu items that correspond to the Toolbar Icons. Other Action Menu items are:

2 Acknowledge Button

Acknowledges the selected alarm

3 Confirm Button

Open the Confirm window, allow an operator comment
Conditions for how alarms are confirmed are set in *Tools/Options/General*

4 Mode button

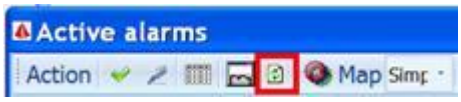
Display current mode (toggle)

- Current mode –Auto select last alarm – Click to change
- Current mode –Remain on selected alarm – Click to change

5 Show/Hide Active Alarms Table

Toggles the Active Alarms window.
This window shows the Name, Date and Time, Priority and alarm type for all Active Alarms. The list sequence can be re-ordered by clicking on the corresponding header. A second click reverses the order.

6 Refresh button



Clicking the Refresh button refreshes the screen to show any new activity
Note: If the option '**Auto refresh Input/Output status**' is selected in the *Tools/Options/Server* screen, then the Refresh button is not shown, and entries in the Active Alarms window are updated automatically according to the Refresh Rate in the same screen (default 1000msec = 1 sec.)

7 Process button

Opens the Execute Process window, allowing the operator to see a list of all available processes, and activate them directly by double-clicking on their icons

8 Map Selection

Allows the user to choose which map to display when the Map tab is selected

Display Selections for the Map tab:

Icons representing Inputs, Relays, Maps, Actions and Processes may be placed on maps using the Position screen (each icon may only appear on one map).
Each of the following 5 buttons allows the user to select whether or not to display named class of objects (Inputs, Relays, etc) when the Map tab is selected.

9 Show Inputs button

Toggles display of all inputs that are placed on this map
If an Input is currently Alarm_ON, it is shown until it is Confirmed regardless of the status of the Show Inputs button.

10 Show Relays button (Outputs)

Show/Hides relays that are placed on this map

11 Show Maps button

Show/Hides Maps that are placed on this map

12 Show Actions button

Show/Hides Actions that are placed on this map

13 Show Processes button

Show/Hides Processes that are placed on this map

14 Acknowledged Alarms

No. of Acknowledged Alarms

15 New Alarms

No. of New Alarms

(i.e. alarms that have been received from a controller but not yet acknowledged)

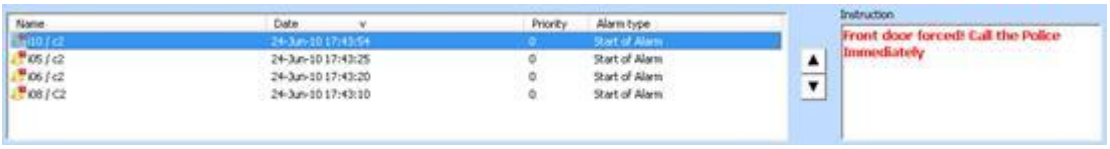
Exit Button

- Exit button - Exit Active Alarms window and return to Main display

Status Time and Date

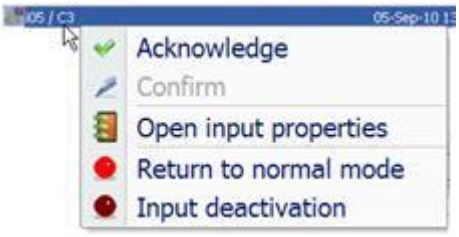
- Last refresh Date and Time

ACTIVE ALARMS: ALARMS TABLE



The Alarm Table shows all Alarms that have not yet been confirmed

- Any alarm may be selected by clicking on the line.
- Right-clicking opens a menu of possible actions:

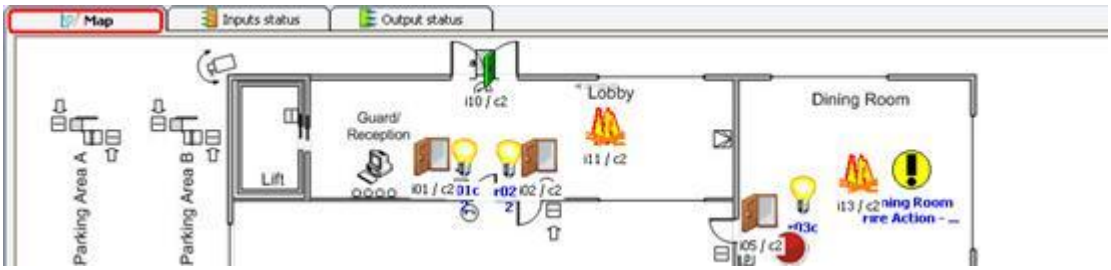


- **Acknowledge** – the operator can acknowledge a selected alarm. The alarm remains in the 'activated' state, awaiting Confirmation.
  Once acknowledged, the alarm counters on the toolbar are updated accordingly (both the current Active Alarms Toolbar and on the Main Toolbar).
- **Confirm** (Only alarms that have been acknowledged) – The operator can enter a comment in the log against the alarm. The alarm will then be removed from the list of Active Alarms.

- **Return to normal mode –** Return the selected alarm to its original Weekly Programme as defined in the Event Handling Programme (either as an individual Input or as part of an Input Group)

- **Input deactivation** – Manually disarms the Input.
  This overrides any automatic activation, and the Input remains deactivated until the Operator selects '**Return to Normal Mode**' for this Alarm.

4.4.1 ACTIVE ALARMS/MAP TAB



Map Tab

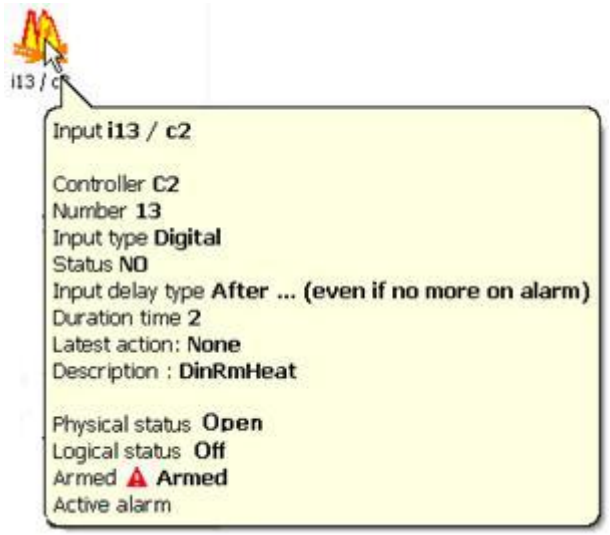
Shows selected map as an active display.

Note: The 'Automatic Refresh' option in the *Tools/Options/Server* screen should normally be selected if the Map view is to be used.

Component Status

Placing the mouse over any of the active icons in the map opens an information widow giving the status of that component.

(Note: fields vary according to the type of icon)

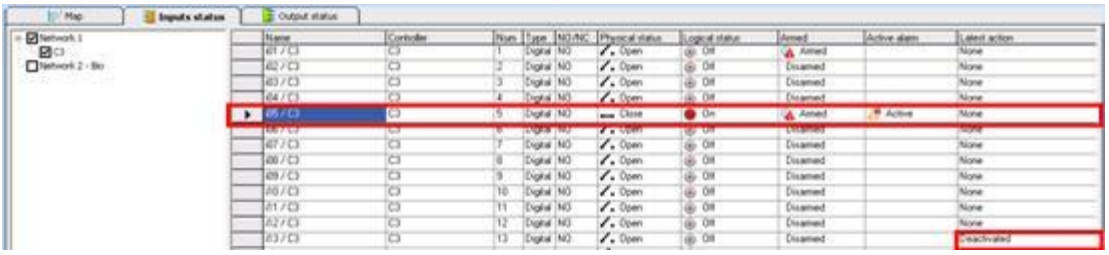


Process Activation

Double-clicking on icons that represent Processes will activate the Process

4.4.2 ACTIVE ALARMS/INPUT STATUS TAB

Tree structure allows operator to choose which Inputs to display in the table.



Inputs Status Tab

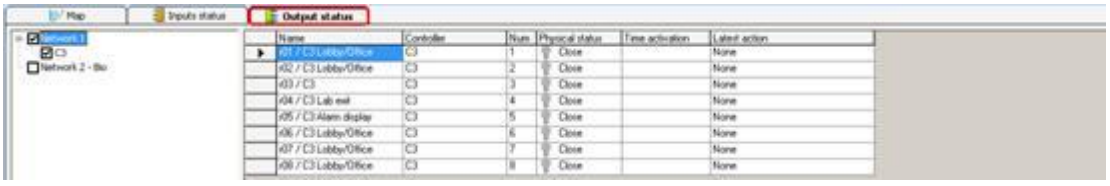
The table shows the last recorded status of the Alarms belonging to the selected Controller/s.

- Clicking the **Refresh** button in the toolbar will display the latest status (unless the system is set to automatically refresh the display (in the *Tools/Options/Server* screen). The latest status of all parameters of the Inputs is then displayed.
- A particular Input may be selected by clicking on it (highlighted in red here) An arrow (►) and a highlight indicates the selected Input.
- Right-clicking on a selected Input opens an Action menu

- **Acknowledge** – the operator can acknowledge a selected alarm. The alarm remains in the 'activated' state, awaiting Confirmation.
- **Confirm** (Only alarms that have been acknowledged) – The operator can enter a comment in the log against the alarm. The alarm will then be removed from the list of outstanding alarms.
- **Open Input properties -** opens the corresponding *Controller/Input/General* screen
- **Return to normal mode –** Cancel all Operator actions or settings from Processes – return the Input to its settings in the Input screen
- **Input deactivation** – Manually disarms the Alarm. This overrides any automatic activation, and remains in force until the Operator selects '**Return to Normal Mode** for this Alarm.

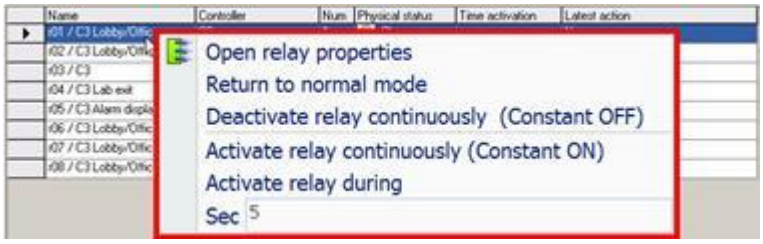
See changes to *Reader/Miscellaneous* Screen

4.4.3 ACTIVE ALARMS/OUTPUT STATUS TAB



Tree structure allows operator to choose which Outputs to display as a table.

Right-clicking on a selected line opens an Action Menu



- **Open relay properties** – opens the *Controller/Output/General* screen for this Output
- **Return to normal mode –** Cancel all Operator actions or settings from Processes – return the Output to its settings in the Output screen
- **Deactivate relay continuously (Constant OFF)** – Relay will be set OFF
- **Activate relay continuously (Constant ON)** – Relay will be set ON
- **Activate relay during**
  Sec ( ) - Relay will activated for the specified no. of secs (Default 5 secs)

4.5 INPUT GROUP

Inputs can be logically associated into Input Groups (also referred to as 'Alarm Zones'). For example, a set of inputs in an area, (such as all the doors, windows and motion sensors in that area), may be grouped under a single name (e.g. 'Floor 1 Inputs').

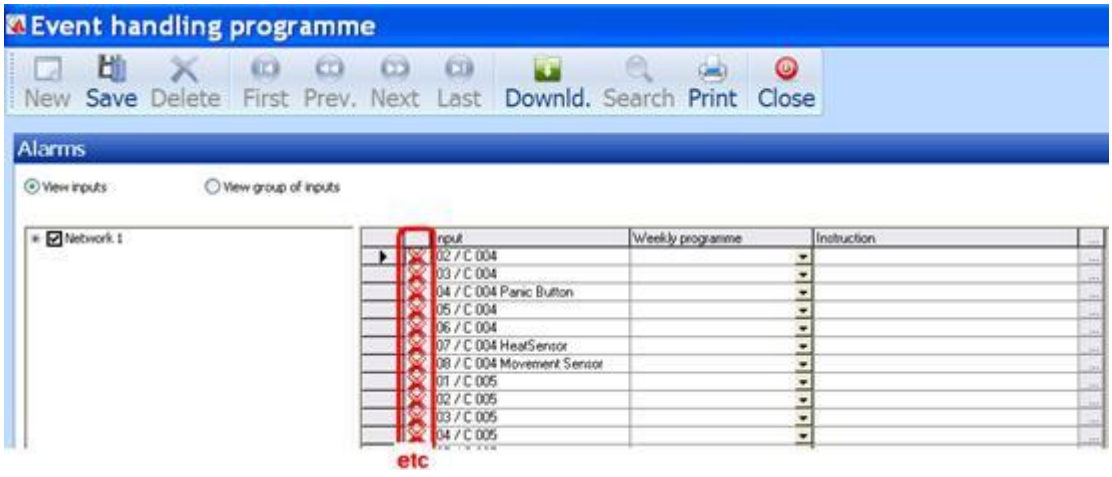
- The Input Group is named in the *Input Group/General Tab*
- Individual Inputs that make up the group are selected in the *Input Group/Inputs Tab*.

Notes:

1. One Input Group can include Inputs from one or more controllers.
2. If an Input Group is activated, then all the inputs of that group are activated.

Avoiding Conflicts:

1. Any one Input should be assigned to only one Input Group.
2. It is advisable to assign Weekly Programmes to Input Groups only, and NOT to individual Inputs.
3. To confirm that there are no conflicts, you can use the 'View inputs' button to check that no individual Inputs have been selected



Automatically Arming and Disarming Input Groups at pre-defined times

An Input Group can be automatically Armed and Disarmed by associating a Weekly programme with the Input Group (in the *Event Handling Programme /Alarms* screen). The Input Group is armed when the Weekly programme associated with it is in its green times.

Arming and Disarming Input groups using Reflexes

Input Groups may also be controlled by **Actions**. These Actions may be used in:

- Global Reflexes
- *Network Reflexes*

This allows arming and disarming the input groups by passing a card, entering a code on a keypad, double-swiping a supervisor card, etc.

See example:

Using Alarm Zones (Input Groups) with Pre-Alarm Notification ('Call to Badge')

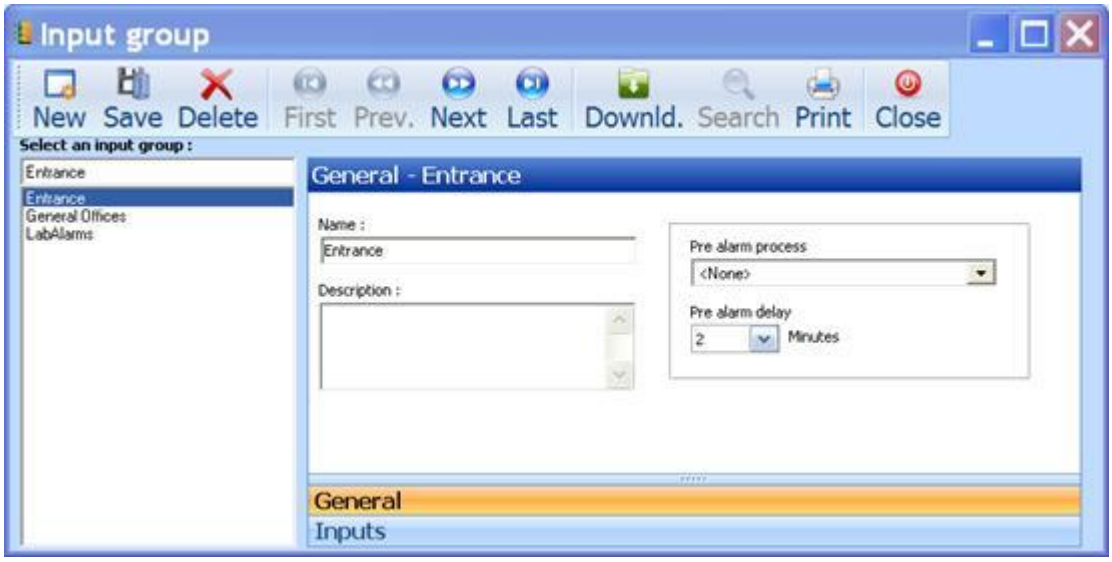
AVOIDING CONFLICTS BETWEEN INPUT GROUPS AND INDIVIDUAL INPUTS

If an individual Input that has been defined as part of an Input Group, is also defined individually (using the 'View inputs' radio button), and a different Weekly Program associated with it, then the Weekly Program *in the individual definition* will be applied.
This applies also later when, for example, the status of an Input Group may change (when its Weekly Programme changes from red to green time or vice versa). If one of the Inputs in that group also has an individual definition then the *individual definition* will remain in force.

Therefore, in order to avoid conflicts, it is recommended to use Input Groups in all cases, and avoid using individual definitions.

4.5.1 INPUT GROUP - GENERAL

See *Input Groups* for background on using Input Groups



Name

Free text

Description

Free text

Pre alarm process

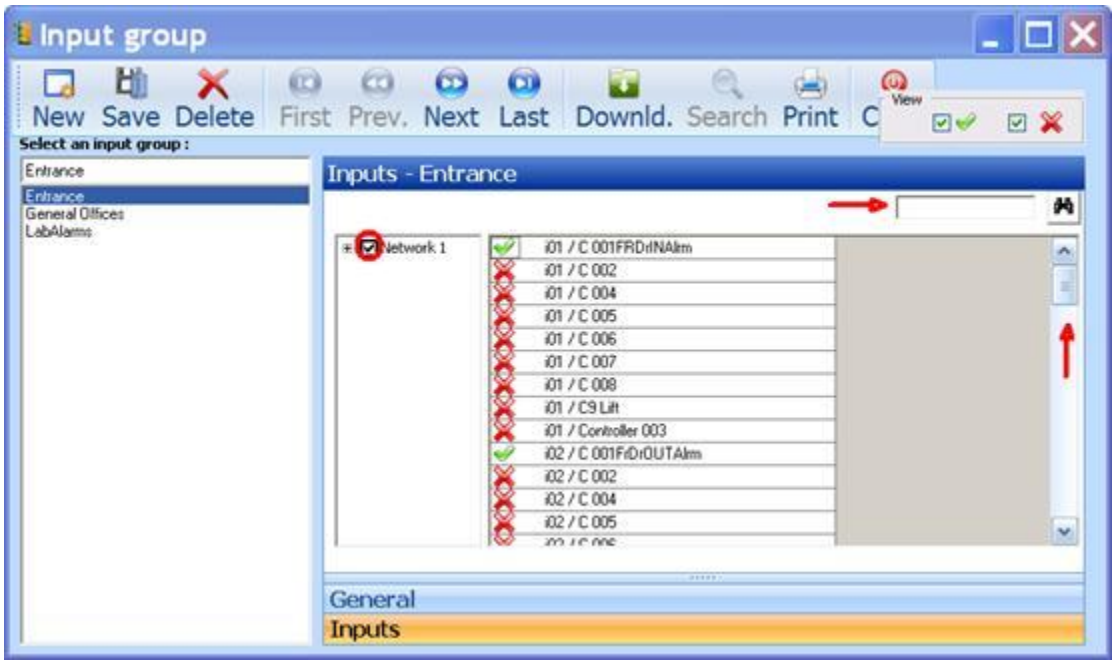
Select the pre-alarm process to be activated before this Input Group is armed. (See description of this function *Using Alarm Zones (Input Groups) with Pre-Alarm Notification ('Call to Badge')*)

Pre alarm delay

Delay between the pre alarm notification process and the input group activation. Each alarm zone may have a pre alarm notification delay from 1 to 120 minutes prior to the input group activation.

4.5.2 INPUT GROUP – INPUTS TAB

The Input Group/Inputs tab allows the user to select which Inputs make up the Input group.



Note: When opening this screen, the Search Window and the slider buttons (indicated above with arrows) are only displayed after the user selects the Network/s to display (circled)

View

Check the appropriate boxes to display only Inputs that are already part of the group (✓), not yet part of the group (✗), or both (✓ and✗).

Search Field

Enter a search parameter to find the first input with a name that corresponds to the search field

Navigation Tree

Shows a tree structure of Inputs by Network and Controller. Expanding the tree allows inputs associated with the corresponding controllers to be displayed

Inputs list

Toggling the ✓ and ✗ symbols associates or disassociates the corresponding input to be with the current Input Group.

4.5.2.1 ARM/DISARM ALARM ZONE FROM KEYPAD (LOCALLY)

A supervisor can arm/disarm an alarm zone manually from a keypad reader until the next transition of its Weekly Programme. This is done by sending transaction code 26XX / 27XX

(where XX is the **Input Group Index** number). The 2nd bus on the controller must be used for sending the arm/disarm commands.

The **Input Group Index** is accessed by selecting the Input Group in the *Input Group* screen and pressing Shift-F12

Alarm Zones operation (Arm, disarm, query status, etc.) may also be performed from a DDS Terminal which has a keypad and a display unit for user dialog.

Note: If XX is '00', ALL the input groups belonging to the same bus will be armed/disarmed.

4.6 OUTPUT GROUP

Outputs can be logically associated into groups of outputs so that they can be activated together. This is done by Actions (through the 'Action' screen), which can be triggered by global reflexes. The outputs in a group may belong to one or more controllers. The group may be activated or deactivated by a single command. If a group of outputs has been activated then all the Outputs in the group are activated.

Example:

Make a group of all door relays so that in the event of a fire alarm they can all be activated (opened) by a single action.

This screen is used to define group, and to select the elements that make it up.
First the Output Group is named and described in the General Tab, and then individual inputs that make up the group are selected.

Name

Free text

Description

Free text

View

Check the appropriate boxes to display only Outputs that are already part of the group (✓), not yet part of the group (✗), or both (✓ and✗).

Search Field

Enter a search parameter to find the first output with a name that corresponds to the search field

Table of Outputs

Toggling the ✓ and ✗ symbols associates or disassociates the corresponding output with the current group.

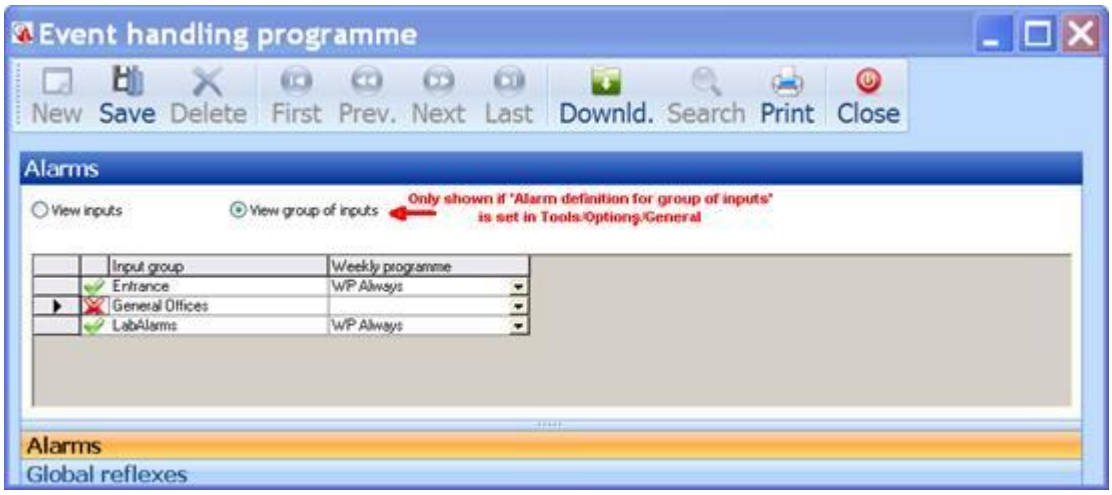
4.7 EVENT HANDLING PROGRAMME

The Event-Handling Program screen provides the *Event Handling/Alarms Tab* to control the activation and deactivation of Inputs, Input Groups, and the *Event Handling/Global Reflexes Tab* to control Global Reflexes.

4.7.1 EVENT HANDLING PROGRAMME/ALARMS

The Alarms tab allows the user to see the full list of Input Groups or individual Inputs in the system. These can be added or removed from the Event handling programme, and associated with a Weekly Programme.
Messages ('instructions') can be associated with Individual Inputs, to be displayed in the Active Alarms screen if the Alarm associated with an Input is triggered.

Note: By default, all Input groups and Inputs are excluded from the Event handling programme. Thus an essential step in configuring an Alarm system is to include all required Input Groups in the Event Handling Programme.
(In the *Input groups* screen, see comments on Avoiding Conflicts)

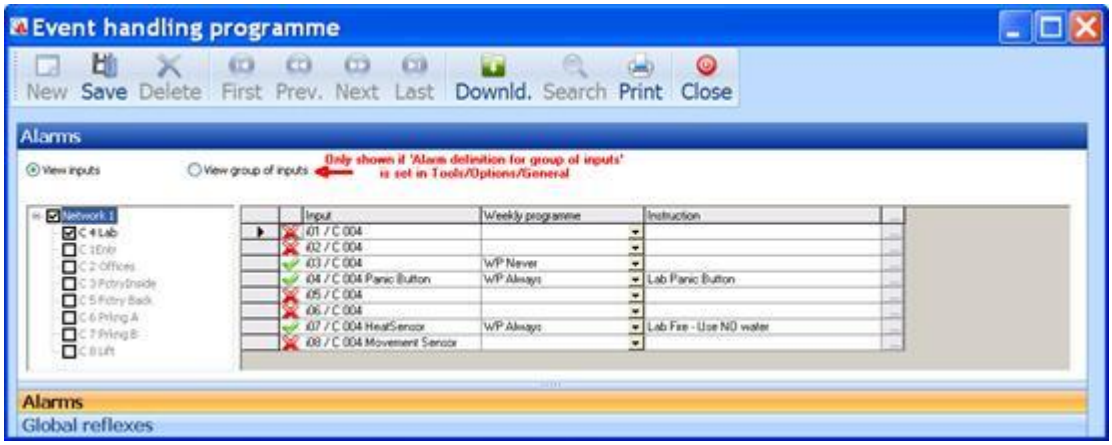


'View group of inputs' radio button

Selecting the 'View group of inputs' button shows Input Groups instead of individual inputs

Input Groups: Many of the system's features are activated by **Input Groups** rather than individual Inputs. To avoid conflicts, it is recommended that **Input Groups** be defined and that the **View group of Inputs** radio button be used rather than **View Inputs**.

This screen lists all Input Groups and allows each to be associated with a Weekly Programs. By selecting ✓, the corresponding Input group is included in the Event Handling Programme, and will be armed during the 'green time' of the Weekly Programme with which it is associated, and disarmed during the 'red time'.
If the ✓is selected without a Weekly Programme being specified and the definition saved, the Input Group will automatically be associated with the 'WP Always' weekly programme.



'View inputs' radio button

Navigation tree

The display can be limited to particular networks by checking or unchecking the relevant boxes. Information about individual controllers can be shown by clicking on the + symbol, and then only inputs on checked controllers will be shown

Input

The Input column lists all the controller inputs for the networks selected in the Navigation window.

The two columns to the left of the Input column indicate:

- whether the row has been selected (►), or whether it has been edited and not yet saved ( )
- The symbols ✓ and ✗ indicate whether the input is currently associated with a Weekly Programme.
  If the value is toggled by clicking the ✗, it will change to ✓. If it is then saved without first specifying a Weekly Programme, then it will automatically be associated with **WP Always**. If it is toggled from ✓to ✗**,** then when it is saved, the Weekly Programme associated with it will be deleted.
- Weekly Programme
  Shows the Weekly Programme associated with this input. The pulldown (▼) provides access to the list of all Weekly programmes, and an alternative may be selected.

Note:

It is recommended to use Input Groups in all cases, and avoid using individual definitions.

Instruction

Free text. (e.g. 'call the police')

When alarms have occurred and are shown in the Active Alarms window, then clicking on a particular alarm will display the Instruction text in the Instruction pane

Selection symbol [...]

Selecting the [...] symbol for an Input opens the *Event Handling Program/Alarm Properties* window, allowing editing of all the details for the Input.

4.7.2 EVENT HANDLING PROGRAMME – ALARM PROPERTIES WINDOW

This window opens from the Event Handling Programme window by clicking on the [...] symbol on the line of the selected Input, in the column to the right of 'Instruction'. It provides a convenient method for editing inputs and their alarm characteristics one at a time.

Input

Shows the name of the input currently selected. When this screen is first opened, the Input shown is whichever Input was being edited in the Event handling Programme window. Any of the Inputs shown in that window can be accessed here, by using the ↑ and ↓ arrows.

✓ and ×

Selecting these buttons allow the selected Input to be associated with a Weekly Programme, or de-associated from one. If associated with a Weekly Programme, then the Input will be armed during 'green' times, for that Weekly Programme.
If ✓ is selected, and no Weekly Programme is selected, then when the Input is updated (by clicking OK), it will automatically be associated with the Weekly Programme **WP always**.

Weekly programme

Shows the Weekly Programme currently associated with this Input. The dropdown allows an alternative weekly programme to be selected. Clicking the [...] symbol opens the *Weekly Programme* screen which shows details of the associated Weekly program, and allows a new weekly programme to be defined if required.

Instruction

Free text. (e.g. 'call the police')
When alarms have occurred and are shown in the Active Alarms window, then clicking on a particular alarm will display the Instruction text in the Instruction pane

Use only for reflex

Selecting this box indicates that the alarm is only to execute the process triggered by the input (defined in a Global Reflex) without raising or recording the alarm event in the journal history, and without being shown in the real-time log on the PC screen.

Priority

(0-9) Importance associated with this alarm

This is used in the Active Alarm Screen, where Alarms can be sorted by clicking on the Priority heading in the Alarms list

Process not repeated until confirmation

If a process is triggered by the input and if this box is selected, the process will be activated only the first time the input goes into alarm_ON state and not on subsequent alarms (as it is the case for a movement detector, for instance). To 'rearm' the process, the alarm must be confirmed.

↑ and ↓ arrows

Click to review the properties of the previous / next alarm.

Note: If any change was made, the system will ask whether to keep or discard the changes before moving to another input.

OK

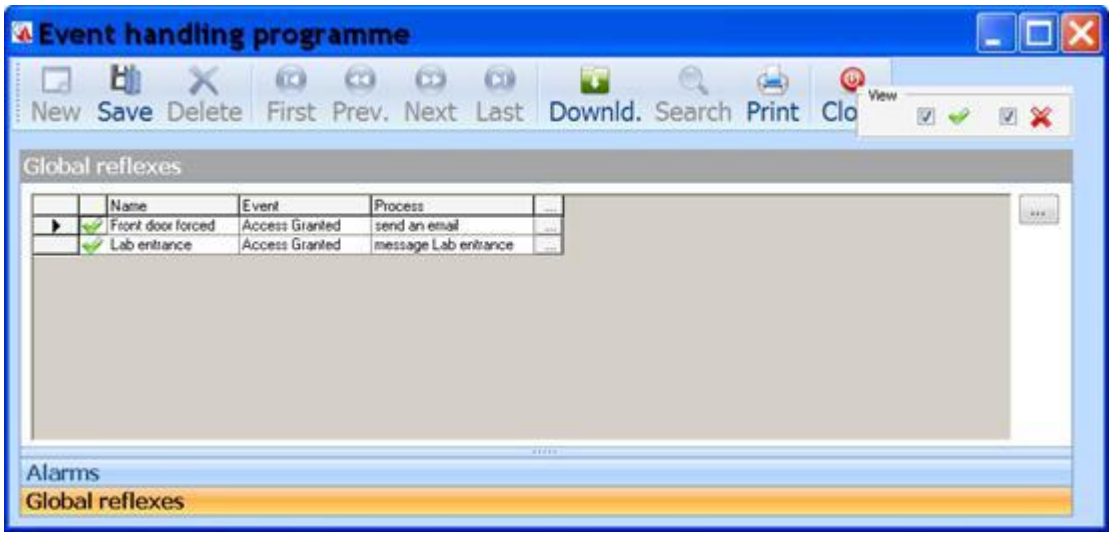
Accept the parameters as entered.

Cancel

Discard changes and leave input definition as it was.

4.7.3 EVENT HANDLING PROGRAMME/GLOBAL REFLEXES TAB

This screen lists all the global reflexes defined in the database.



View:

✓ displays the global reflexes list included in the Event Handling Program

× displays the global reflexes list excluded from the Event Handling program

First column of the table: ✓ or ×

Select ✓ to include the global reflex in the Event Handling Program

Select × to exclude the global reflex from the Event Handling program

By default, all the global reflexes are included in the Event Handling Program.

Name:

Name of the global reflex

Event:

Event associated with the global reflex, i.e. the event that will trigger the process defined in the reflex.

Process:

Process associated with the reflex, i.e. the process to be executed when the event occurs.

[...] (on the line of the reflex):

Click on this button to display the Global Reflex – General Tab for the selected item, for creating, consulting or modifying data.

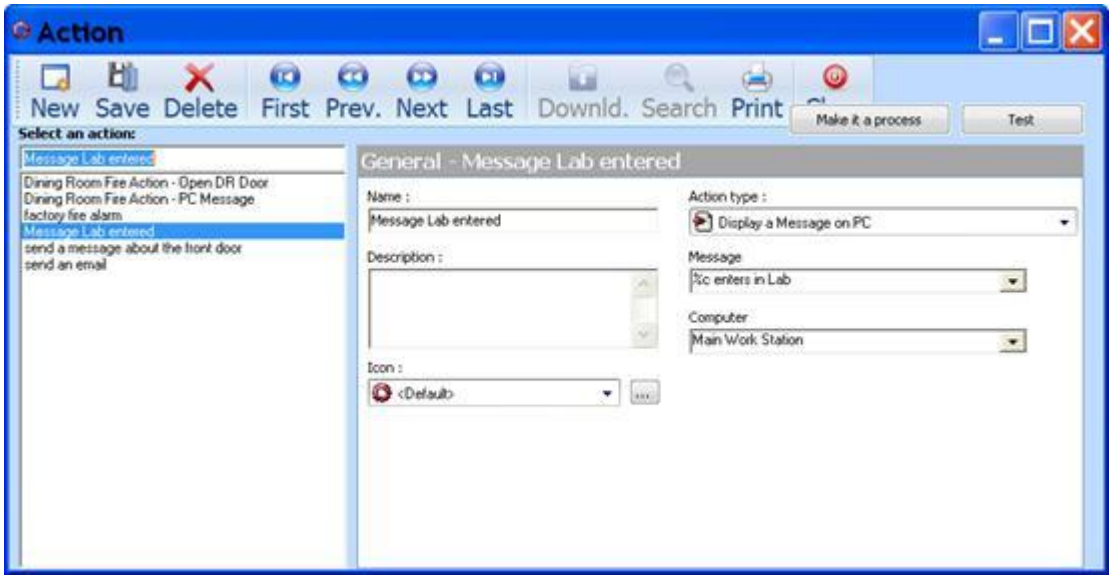
[...] (outside the table):

Click on this button to display the Global Reflex – General Tab, without selecting an item, for entering new data.

4.8 ACTION

Define Actions to be carried out by the system as part of Reflexes, in response to alarms or conditions sensed by the system. Actions can be initiated by

- Processes that include the Action
- Global reflexes that include the Action
- Icons of the Action positioned on maps
- Direct activation by the operator using the *Manual Action/Execute Process* screen



Name

Free text

Description

Free text

Icon

Select the icon to associate with this Action from dropdown. This enables the user to place the icon on a Map using the Position screen. The Action can then be activated by double-clicking on the icon in the Active Alarms display.

Click [...] to open file explorer to choose a different file. If a different file is chosen, it will be added to the default Icon file

Action type

Use dropdown to select type of action

Each Action Type, when selected, displays the parameters needed for that type of action – see *Types of Actions with Parameters*

Parameters

(no. of parameters depends on type of Action selected)

Enter the required value/s, or select from the list of available parameters.

Make it a process

Clicking this button will directly create a Process consisting of this single action.

Note: The action must be **saved** before using this button

Test

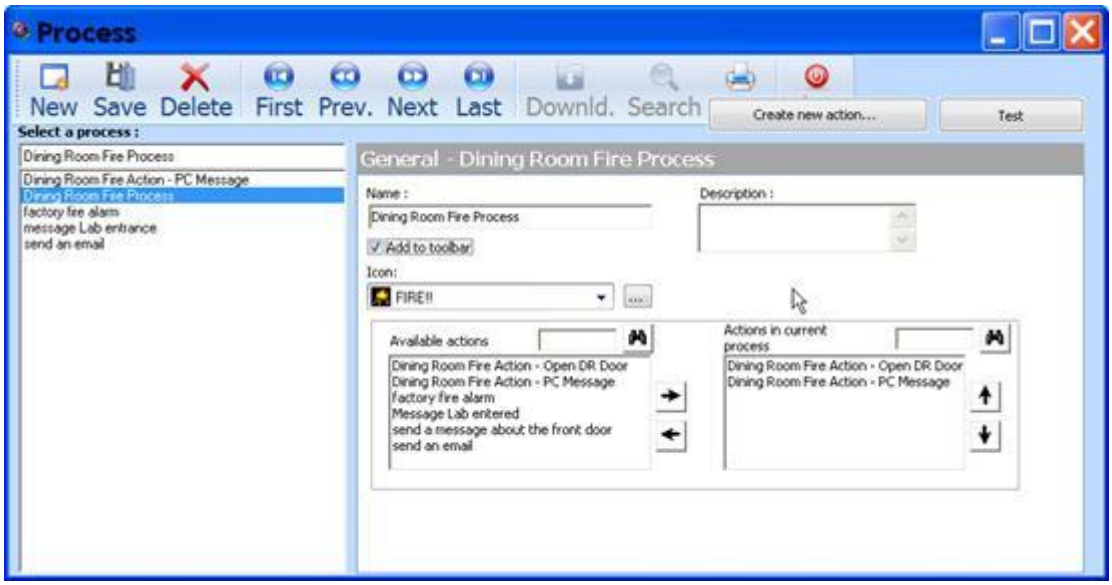
Click this button to test the Action

4.9 PROCESS

A process is a user-defined set of one or more actions that can be invoked by a Global Reflex, or by several other triggers, such as;

- Counters
- Parking Status
- Guard Tour
- By Operator in the Active Alarm Screen, or the Toolbar

All the defined actions are listed, and they can be selected individually to make up a new Process. The sequence in which they should be carried out can also be chosen.



Name

Free text

Add to toolbar

Check to place an Icon and text on the Toolbar so that the process can be selected from the main screen at any time.

Icon

Select Icon to associate with this Process from dropdown.

The Icon can be used in three places:

- On a map in the Active Alarms screen (using either the *Position* screen or the *Position* screen if the Graphics+ module is used)
- On the Toolbar (if the user wants it to be available there)
- In the *Manual Action/Execute Process* screen

The Process can then be activated by double-clicking on the icon in the active Alarms screen, on the Toolbar, or in the Execute Process screen.
If the user wishes to use an Icon that is different from the default icons provided, click [...] to open file explorer to choose a different file.

Description

Free text

Available actions

List of all Actions that have been defined in the system. The Search box allows the user to find Actions in this list by name.
Actions can be selected in this window and the ←→ buttons allow them to be copied to or removed from the 'Actions in current process' window

Actions in current process

List of all Actions to be included in this Process. The ↑↓ arrows allow a selected Action to be moved up or down the list, to set the sequence in which the Actions are to be carried out. The Search box allows the user to find Actions in this list by name.

Create new action

This button allows a new Action to be created while defining the Process. The Action window will open; the new Action can be defined and saved. After closing the Action screen and returning to the Process screen, the new Action will be added to the list of available actions.

Test

Click this button to test the Process under definition.

When the list of Actions for this Process is complete and in the required sequence, click **Save**

4.10 GLOBAL REFLEX

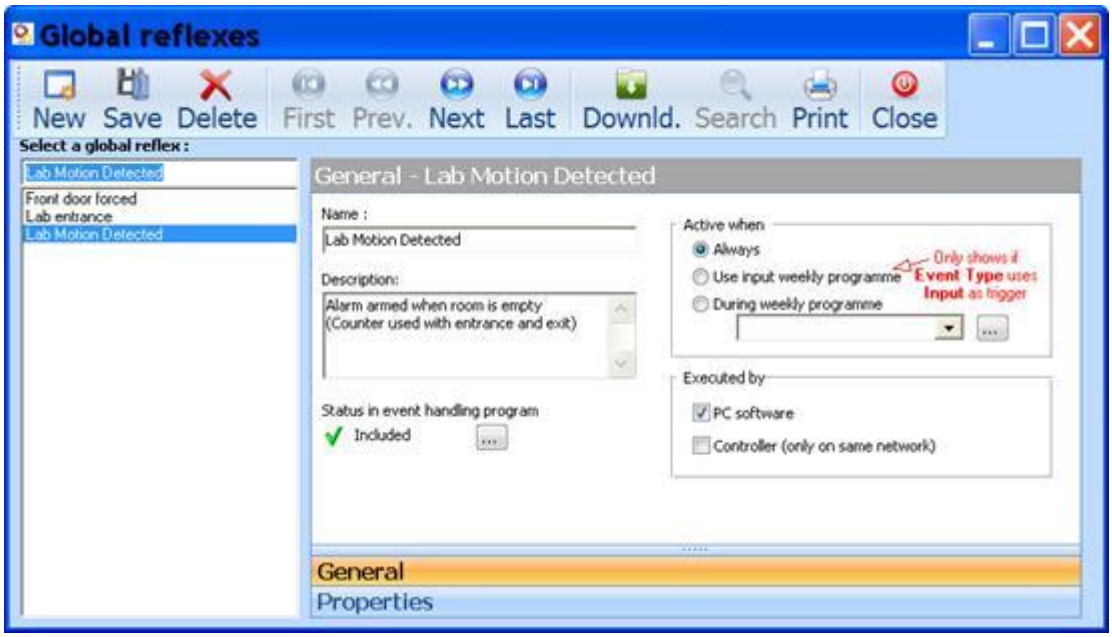
A Global Reflex is the automatic activation of a Process, triggered by an Event.

The *Global Reflex/General* screen defines the Reflex, and the *Global Reflex/Properties* Tab allows the user to select the event that triggers it, the Process it should activate, and the parameters to use.

See *Network Reflexes* for the special considerations needed when defining Network Reflexes (these are Global Reflexes triggered and executed using controllers connected through their 2nd bus, and not needing support from the central system)

4.10.1 GLOBAL REFLEX/GENERAL TAB

The name, description and activation status of the global reflex are defined in this screen.



Name

Free text

Description

Free text

Status in Event Handling Program

Symbol ✓ or ✗ shows if this Global Reflex is part of the Event Handling Programme. In order for a Global Reflex to be executed, it must be part of the Event Handling programme. In addition, it must either be defined as 'Always active', or it must be in a 'green' period in the Weekly Programme that is associated with it.

[...] opens the Event Handling Global Reflexes tab showing a summary table of all Global Reflexes, their status in the Event Handling Programme, the Event that triggers them, and the Process that they invoke.

Active when

Use radio button to select 'Always', 'Use Input Weekly Program'*, or 'During Weekly Program' to define when this Global Reflex is to be active.

If 'During Weekly Programme' is selected, use dropdown to select a Weekly program.

Click [...] to open screen to define a new Weekly Programme

***Use Input Weekly Program**:

This option only shows if the 'Event Type' depends on an Input

e.g. Start of Input, End of Input, Line Short or Line Cut

(this is set in the *Global Reflexes/Properties Tab*)

Executed by

Check if this Reflex is to be executed by:

- **PC software** (a standard 'Global Reflex')

and/or

- **Controller** (a '*Network Reflex*)

  The controller on which the event occurred sends the command to execute the process. This same controller can carry out the Process or it can be another controller in which case:

  - it must be a controller **that is on the same network**

- both **sending** and **receiving** controllers **must be connected via** their 2nd bus

4.10.1.1 NETWORK REFLEXES

Certain global reflexes can be performed between the controllers themselves even at times when the PC is not running. These are called **Network Reflexes**.

(See *List of Event Types with Parameters* for types of events which can trigger Network Reflexes).
Only processes with ONE action are supported.

The only supported action type is "Relay Activation" (except 'Never activated - constant OFF', not supported yet). Obviously the controller that transmits the command and the one that receives it, both need to be on the same network, either via their main communication port or via their secondary communication port. So, there are two different modes of operation:

Mode 1: Network Reflexes via the main communication port
In this mode the controller will perform network reflexes via the main communication bus, but only after 50 seconds of not receiving any polling or other commands from the PC. To activate this mode, set the controllers either without secondary bus (default), or with it, but when 'Bus 2' is not set to do network reflexes. See Network reflex section in *Bus 2 definition*.

Mode 2: Network Reflexes via the secondary communication port
In this mode the controller will perform network reflexes via the secondary communication bus, whether or not the PC communication keeps on communicating on the main bus. To activate this mode set the controllers with secondary bus, and make sure that this bus is set to do network reflexes. See Network reflex section in *Bus 2 definition*.

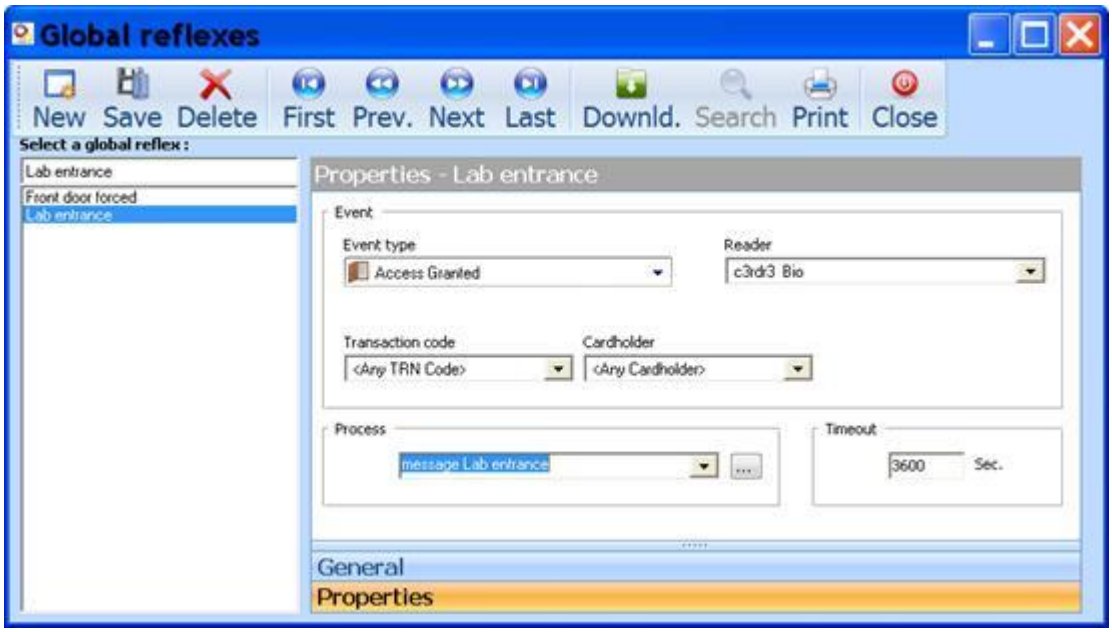
4.10.1.2 RESTRICTIONS ON NETWORK REFLEXES

Processes to be used as *Network Reflexes* must comply with the following:

- Process may only contain a single Action
- the Action must be of the type 'Relay Activation' (this action type can only be defined for a single relay, not a group of relays)
- Access Granted - 'one reader only or 'any reader' (group of readers not supported)
- Access Denied - Only "without denied reason",
- Alarms – without a specific status
- Power Up - Only "from a specific controller" ("Any controller" not supported)

4.10.2 GLOBAL REFLEX/PROPERTIES TAB

This screen defines the specific events that are going to set off the actions and their parameters.



Event

Event type

Use dropdown to select type of Event to trigger this Global Reflex, from list of Event types

Depending on the event source (see *List of Event Types with Parameters*), the required parameter fields are presented,

Process

Use the dropdown to select the Process to be triggered by this Global Reflex.

Click […] to open the Process screen and define a new Process.

Note: Processes to be used as *Network Reflexes* must comply with the following:

- Process may only contain a single Action
- the Action must be of the type 'Relay Activation' (this action type can only be defined for a single relay, not a group of relays)
- Access Granted - 'one reader only or 'any reader' (group of readers not supported)
- Access Denied - Only "without denied reason",
- Alarms – without a specific status
- Power Up - Only "from a specific controller" ("Any controller" not supported)

Timeout

Maximum delay (in secs) between the time of the event (time and date registered in the controller) and the time of the PC when it receives the event, beyond which the process associated with the Global Reflex will not be performed

(Default value = 3600 sec.)

4.10.3 LIST OF EVENT TYPES WITH PARAMETERS

For Events to be used to trigger Network Reflexes (NR=✓), see *Restrictions on Network Reflexes*

Event type	NR	From	1st parameter	2nd parameter	Event Notes
Access granted	✓	Reader	Transaction code	Cardholder	1, 2
Access granted + duress code	✓	Reader	Transaction code	Cardholder	1, 2
Access denied	✓	Reader	Transaction code	Cardholder / Denied reason	1, 2, 4
Access denied + unsuccessful trials	✓	Reader	Transaction code		1, 2
Start of alarm	✓	Input	Input status		3, 5
End of alarm	✓	Input			3
Line short	✓	Input			3
Line cut	✓	Input			3
Table error	×	Controller	Table		
Low battery	×	Controller			
Power down	×	Controller			
Power up	✓	Controller			
Power Supply failure (input PSF closed)	×	Controller			6
Power Supply OK (input PSF opened)	×	Controller			6
Box Opened (input MS opened)	×	Controller			6
Box Closed (input MS closed)	×	Controller			6
Communication OK	×	Controller			
Polling error	×	Controller			
Reader disconnected	×	Reader			
Reader connected	×	Reader			
User acknowledgement	×	User	Input		
User confirmation	×	User	Input		
Unknown card	×	Reader			1
Unknown card and successive unsuccessful trials	×	Reader			
Non allocated badge	×	Reader			1
New record	×	User			
Save record	×	User			
Delete record	×	User			
Application login	×	User			
Application logout	×	User			
Arrival	×	Guard Tour Program	Checkpoint	Guard	
Early arrival	×	Guard Tour Program	Checkpoint	Guard	
No arrival on time	×	Guard Tour Program	Checkpoint	Guard	
Late arrival	×	Guard Tour Program	Checkpoint	Guard	
Scheduler	×	Day	Month	Hour / Minute	

Event Notes:

(1) An access group can be selected as a trigger for global reflexes associated with access. The group is signalled by a ">" sign before the access group name.

(2) When a transaction code is selected, the event is only set off if the badge holder types the transaction code on the reader's keypad prior to swiping his badge. The transaction code is a sequence of two numbers between "00" and "99".

In case of supervisor cards, a second badge reading within 10 seconds will send the transaction code 99 to the system, without need of a keypad.

(3) An input group can be selected as a trigger for global reflexes associated with inputs. The group is signalled by a ">" sign before the input name. Note: there is no input group by default.

(4) A specific denial can be chosen to trigger a global reflex. The different reasons of access denial are : Any denied reasons, Wrong keypad code, Full / Lock / No answer from door, Time not OK, Anti-Passback not OK, Reader not allocated, Site code not OK, Inhibited cardholder, Access group.

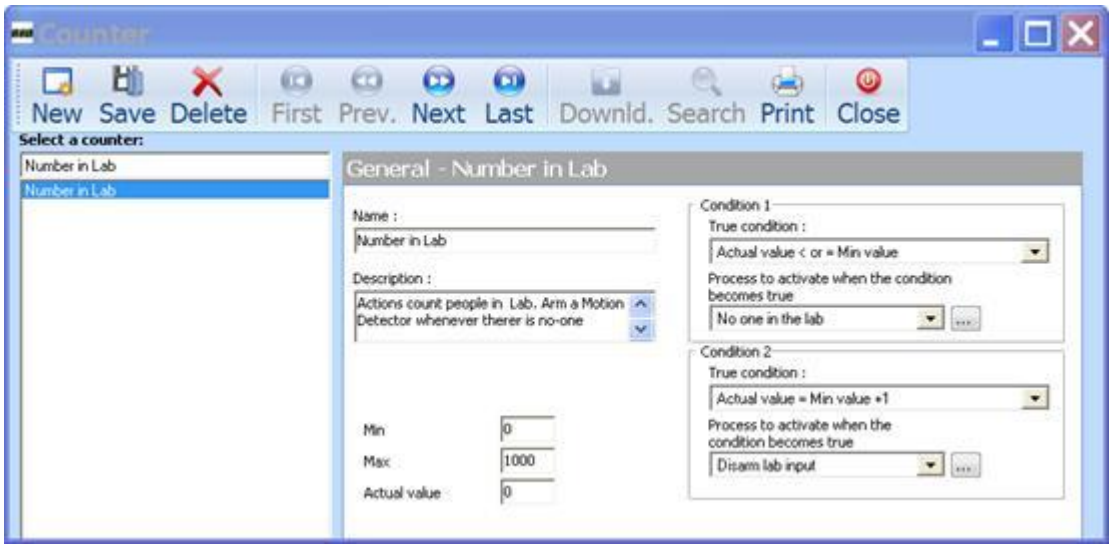
(5) Input status: Immediate or delayed, Immediate, Delayed.

(6) Selected models only

4.11 COUNTER

Counters contain values, compare them against predefined parameters whenever their value changes, and activate Processes if preset 'compare' conditions are satisfied or not satisfied.

See *Counter Concepts*



Name

Free text

Description

Free Text

Min, Max

Enter the Minimum and Maximum values that are to be used in the 'Conditions' that set whether the Process associated with this Counter is to be activated. Click […] to define a new Process

Actual Value

Displays current value of counter
(automatically updated whenever the value of the counter changes)

Conditions

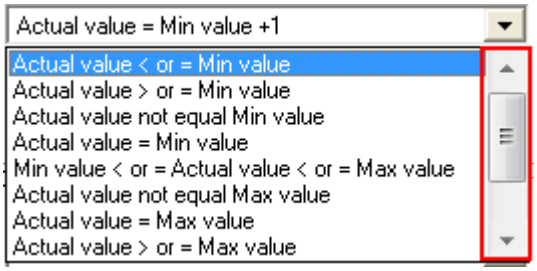
Note on Conditions Logic: Each time the value of the Counter changes, the user can specify one or two 'Conditions' that must be tested. Each Condition has an associated Process to be carried out if the test result is 'true'.

Condition 1

Define the first 'compare' to carry out whenever the value of the Counter changes, and specify the Process that must be activated if the condition is satisfied

- True condition:

Select from list of possible comparisons to Min or Max value



Use the slider to see more choices

- Process to activate when the condition becomes true

Select from list of defined Actions. Default is <none>

Click [...] to open screen to define a new Action

Condition 2

As for Condition 1:

Define the second 'compare' to carry out whenever the value of the Counter changes, and specify the Process that must be activated if the condition is satisfied

If a second Condition is specified, it will **always** be tested after the first Condition has been tested, regardless of whether the result of the first test was 'true' or not.

If no 2nd condition is required, leave the Process for the 2nd condition as <none>

4.11.1 SETTING UP A COUNTER

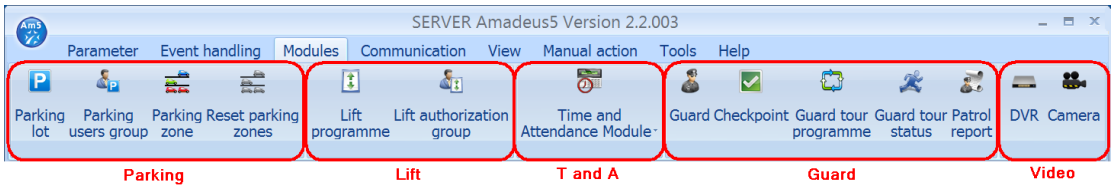
Operating Mode

1. Create a Counter
2. Create an Action/Process incrementing the counter
3. Create an Action/Process decrementing the counter
4. Create a Global Reflex determining which event increments the Counter (i.e. invokes the action/process)
5. Create a Global Reflex determining which event decrements the Counter (i.e. invokes the action/process)

Caution - Conditions linked to a counter may also trigger some processes:

Be careful not to create a logical loop: i.e. a process which triggers a counter which, under some circumstances could trigger the same process.

5 MODULES TAB



There are 4 groups of Operator actions in the Modules Tab:

Parking Module	Lift Module	T &A Module	Guard Patrol Module	Video Module
Parking Lot	*Lift Programme*	*Time & Attendance (Standard Module)*	*Guard*	*DVR*
Parking Users Group	*Lift Authorization Group*	*Time & Attendance (T+ Module – if installed)*	*Checkpoint*	*Camera*
Parking Zone			*Guard Tour Programme*	
Reset Parking Zones			*Guard Tour Status*	
			Patrol Report	

5.1 PARKING MODULE

The Parking module allows access control of Parking Lots and management of the available space in Parking Zones, according to defined groups of cardholders who are authorized to use the facility.

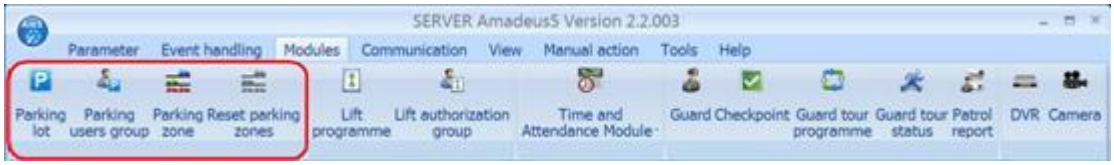
The system manages the parking activity using three concepts:

- **Parking Lot**: Physical area where cars are parked. A Parking Lot is controlled by one or more access points (card readers). The system can manage one or more parking lots.
- **Parking Users Group**: A Parking User Group can be made up of cardholders from any company or entity that rents or owns parking spaces. Any cardholder can be set to be a member of a Parking Users Group.
- **Parking zone**: This defines a certain number of spaces allocated to a Parking User Group in a specific Parking Lot. A defined parking zone is only accessible by the corresponding parking users group.

For each Parking Zone, two types of information are available:

- A **counter** displaying the amount of available spaces at any time in the zone,
- A **list of access points** used to enter in the parking zone. For each access point, the counter may increment (+1), decrement (-1) or remain unchanged after a badge has been passed.

A Cardholder may access a Parking Lot only if his Parking Users Group has a Parking Zone in this requested parking lot, and this parking zone is not full.

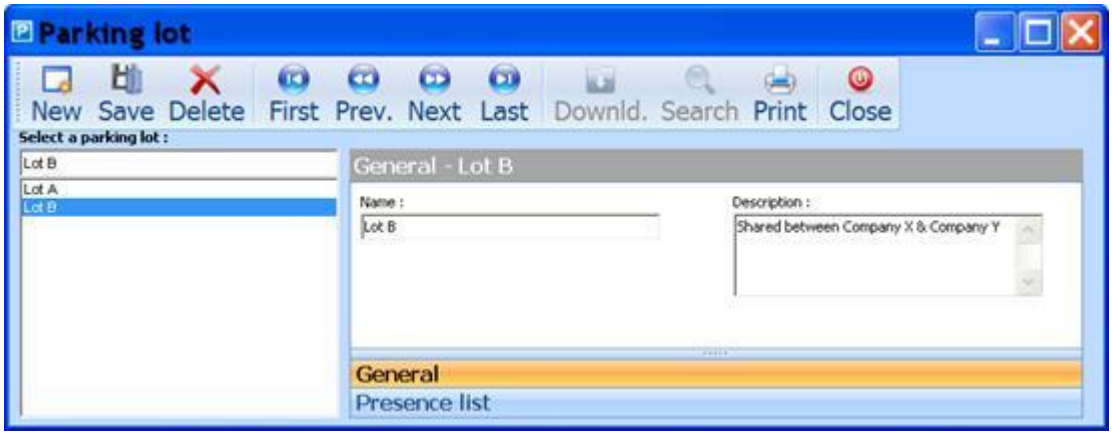


See *Parking Module – Example*

Parking Module Screens			
Parking Lot	*Parking Users Group*	*Parking Zone*	*Reset Parking Zones*

5.1.1 PARKING LOT

Parking Lots are defined with this screen. A Parking lot designates a name for the lot, and can provide information about its occupancy (using the *Presence List* tab).
The number of places in a Parking Lot is the total of all places in Parking Zones that are defined as being part that Parking Lot.



Name

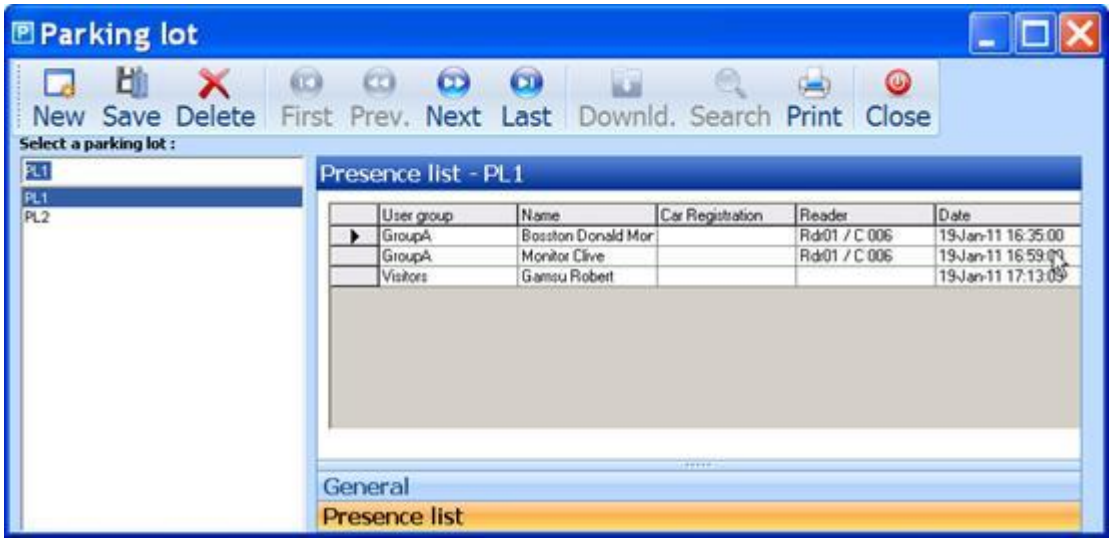
Free text

Description

Free text

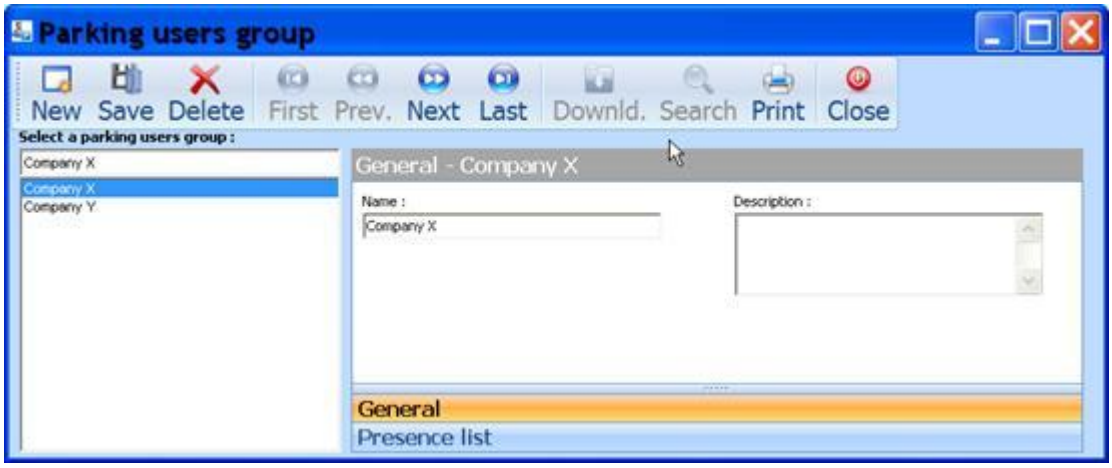
5.1.2 PARKING LOT PRESENCE LIST TAB

Once lots have been created and assigned to Parking User Groups and Cardholders, the Presence List Tab shows which Cardholders are currently listed as being in that Parking Lot (listed by Parking User Group). This tab is displayed for information only – no updates can be made on it.



5.1.3 PARKING USERS GROUP

The Parking Users Group is the name of a group to which any cardholders can be associated (using the *Cardholder/Personal* screen). Each *Parking Zone* definition sets how many spaces may be used by members of particular Parking User Groups in a particular *Parking Lot*.



Name

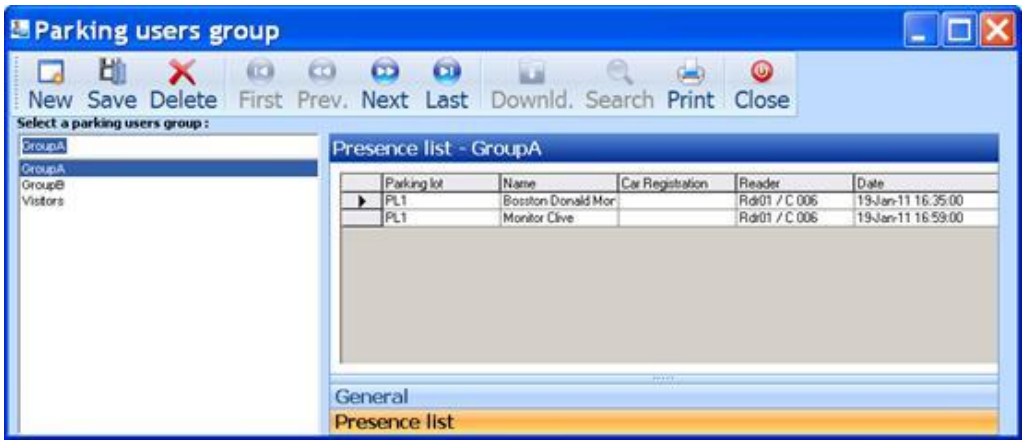
Free text

Description

Free text

5.1.4 PARKING USERS GROUP PRESENCE LIST TAB

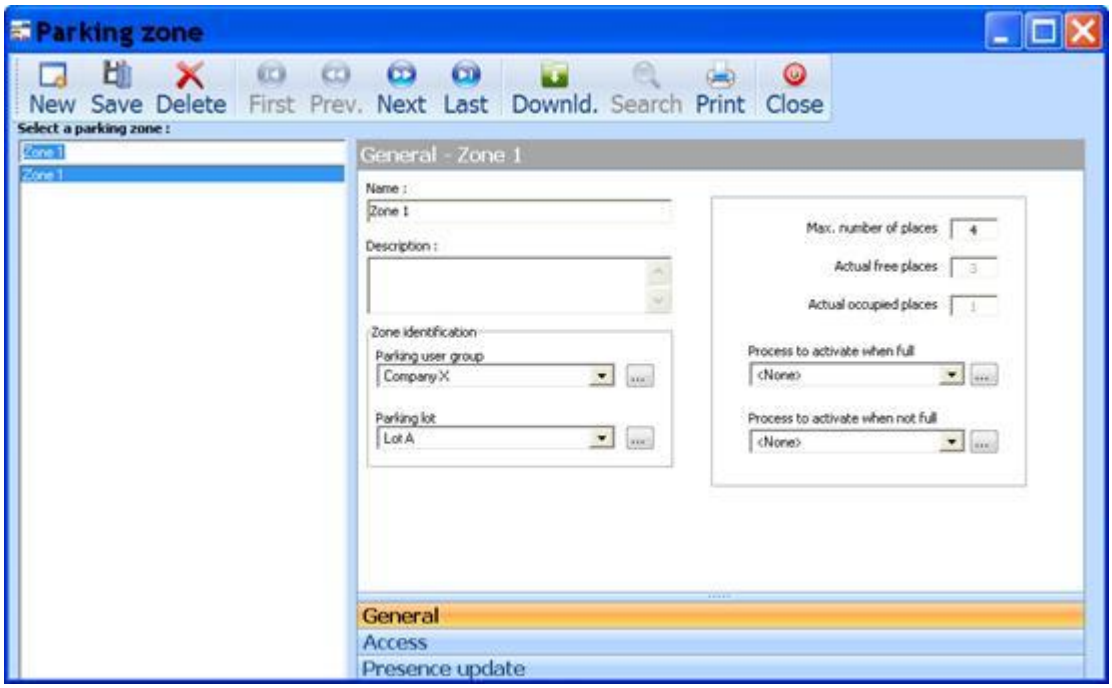
The Presence List Tab shows which members of that Parking User Group are currently listed as using the selected Parking Lot. (Parking Lots and Parking User Groups must be have been defined, and Cardholders associated with them)



This tab is displayed for information only – no updates can be made on it.

5.1.5 PARKING ZONE/GENERAL

Parking Zones allow the user to associate Parking User Groups with Parking Lots, and to specify a number of spaces of the Parking Lot to be reserved for that Zone.



Select a Parking Zone or press **New** to define a new one.

Name

Free text

Description

Free text

Zone Identification

- Parking users group

Select a Parking User group to be associated with this zone, from the list of defined parking user groups.

Click [...] to open screen to define a new group

- Parking lot

Select a Parking lot to be associated with this zone, from the list of defined parking lots.

Click [...] to open screen to define a new parking lot

- Max. Number of places

Enter the maximum number of users who may be accommodated by this Parking Zone

- Actual free places

- Actual occupied places

Information only – these two fields are automatically updated by the system

- Process to activate when full

If a Process must be activated when the zone is full, use dropdown to select the Process to be activated from list of Processes. Default is <none>

Click [...] to open screen to define new process

Note: This process will only be activated when the zone is accessed and is full.

Process to activate when not full

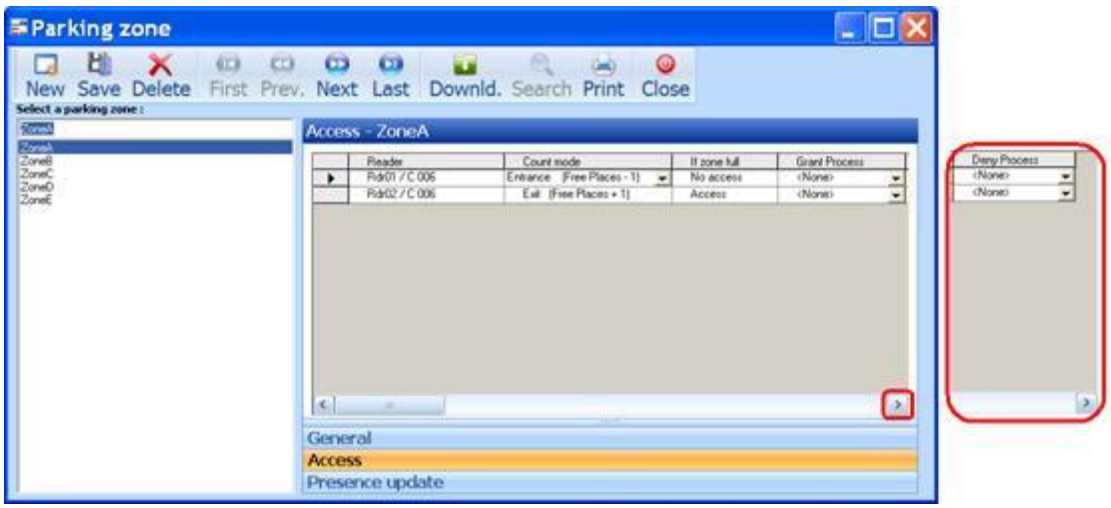
If a Process must be activated when the zone is not full, use dropdown to select the Process to be activated from list of Processes. Default is <none>

Click [...] to open screen to define new process

Note: This process will be activated *each time* the zone is accessed but is not yet full – i.e. **each access**.

5.1.5.1 PARKING ZONE ACCESS TAB

The Parking Zone Access Tab allows the user to define how each Reader associated with a Parking Zone updates the Counter for that Zone.



Viewing all columns: As shown above, not all columns may be displayed when opening the screen. Click on the scroll arrow to see the full display or drag the side of the window to enlarge it.

Reader Table

The readers associated with the selected Parking Zone are listed, with the following columns.

- Reader

Name of the reader

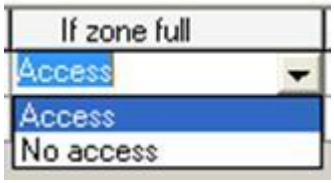
- Count Mode

Defines how to update the place-counter for this zone when this reader is used. Click this cell for a selected reader to open a dropdown that shows the available options:

Note: This must be done separately for each Parking Zone.
The default setting is Neutral – (i.e. Presence Lists will not be updated), so in order to use the module to control the number of vehicles that may enter, the readers must be explicitly set to 'Entrance (free places - 1)' and 'Exit (free places + 1)'.

- If zone full

Defines whether to grant access or not when the parking zone is full. Click this cell to open the dropdown:



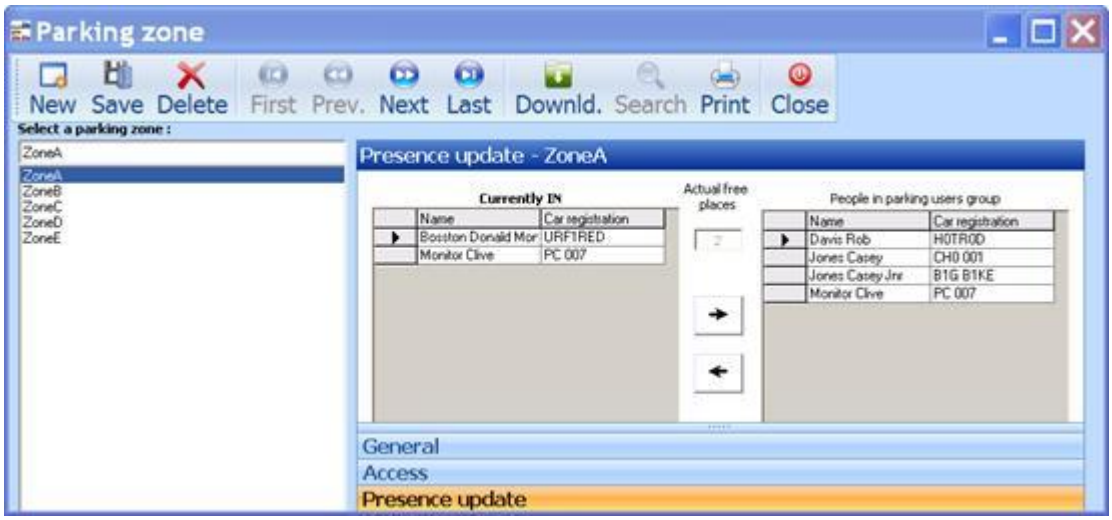
Grant Process, Deny Process

(These are optional – if no additional Process is required, they can remain <none> as defined by default).
Clicking either of these cells displays a dropdown list from which the User can choose additional Processes that must be invoked when access to the Parking Zone is either **Granted** or **Denied**
For example, a Process may be used to increment and decrement an external display panel showing the number of available spaces

Grant Process
PARK Zone A Msg
LAB Light local Alarm Light
LAB Message No-one in Lab
LAB Report No. in LAB
MAIN ENTRANCE FORCED Send an Email
PARK Zone A Msg

5.1.5.2 PARKING ZONE PRESENCE UPDATE TAB

This Tab allows the user to select each Parking Zone, and manually update the status of all cardholders entitled to use that Zone (according to their Parking User Groups).



Currently IN

List of cardholders currently listed as IN the parking zone

Actual Free Places

Number of free places according to the counter associated with this parking zone

People in parking users group

List of all cardholders eligible to use this parking zone (i.e. belonging to any parking user group that is associated with this parking zone)

Arrows → ←

Selecting any cardholder and clicking on the appropriate arrow will move that cardholder in to or out of the **Currently IN** list.
The counter will be updated accordingly.

Duplicate records: Depending on how access to parking is managed it is possible that duplicate entries may be created by badges being swiped twice, etc.
Instances will be reduced by using the Anti Passback capability at the IN and OUT readers

5.1.6 RESET PARKING ZONES SCREEN COMMAND

This function manually resets ALL parking zone counters, i.e. all parking places will be freed immediately. The user must confirm the action before it is executed.

For additional options, see *Reset Parking Zones Using Processes*

```
Are you sure you want to reset parking zones?
```

A confirmation message is displayed.

```
Reset Parking Zones has succeeded
```

5.1.7 RESETTING PARKING ZONES USING GLOBAL REFLEXES

Methods include:

- **Triggered by a specific transaction code from a reader** (From a reader with a keypad, or by swiping a Supervisor card twice within 15 secs, which sends the transaction code 99 with the transaction)
  The global reflex can be triggered by this code, and can be set up to respond only to a specific reader
- **Triggered by a specific input status** – such as assigning an input to an operator button
- **automatically at a scheduled time**, by choosing the "Scheduler" as global reflex event type and specifying the date and hour when the parking zone should be reset

5.1.8 RESET PARKING ZONES USING PROCESSES

In addition to this manual action, the application provides two scheduled methods to clear the parking counters:

- **Automatic daily action clearing all parking zone counters** - Select this option in the *Tools/Options/Server* screen, and specify the requested time for this operation
- **Clear selected counters by global reflex** – Create an action with the "Reset parking zones" type and select which parking zone to update. Then, a global reflex that includes that Action will reset the specific parking zone counter whenever it is triggered.
  For more details, see *Event handling/Actions* and *Event handling/Global Reflex* screens

5.2 LIFT MODULE

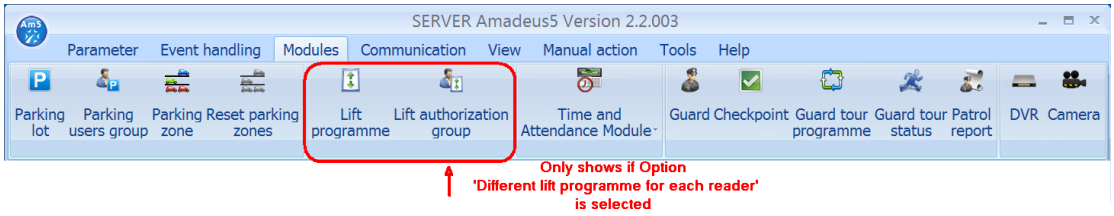
The Lift Module manages access to the floors served by one or more lifts.

- A Lift Controller (type TPL4 Lift) is connected to the buttons of a lift that request individual floors
- Each lift has a reader installed in it

Note: In some cases, readers may be installed outside the lifts, but as each controller can only manage up to 4 readers, this is only done where only a few floors are to be controlled

- *Lift Programmes* are defined
- The Cardholder/Personal screen is used to associate a Lift Programme with a Cardholder. This controls which floor/s the the lift will service for that cardholder.
- For larger installations, the *Lift Authorization Groups* option provides additional flexibility by allowing each lift reader to have its own programmes, rather than sharing a common Lift Programme for all lift readers on a controller.

The cardholder passes his card at a lift reader and the system checks the Lift Programme associated with that cardholder (*Cardholders/Personal* screen). Only those relays that correspond to the floors defined in the Lift Programme associated with that Cardholder are activated – so when the cardholder presses a floor button it will only function if he is requesting a floor for which he has authorization.



Lift Module Screens	
Lift Programme	*Lift Authorization Group*

A Lift Program defines the combination of floors accessible by a group of users. It controls *only* which floor buttons are to be usable by cardholders – it does not control access to the lifts, nor to the areas served by these lifts. Note: If the cardholder has not selected a floor within a specified delay, access will be denied to all floors until he passes his card again. This prevents unauthorized persons from using the lifts.

Lift Authorization Groups allow different Lift programmes to be set up for each lift reader.

Lift Programs can either be the same for all lift readers belonging to a specific controller or they may be specific for each reader. Making separate Lift Programmes specific to each reader is especially useful in big installations as it provides increased flexibility.

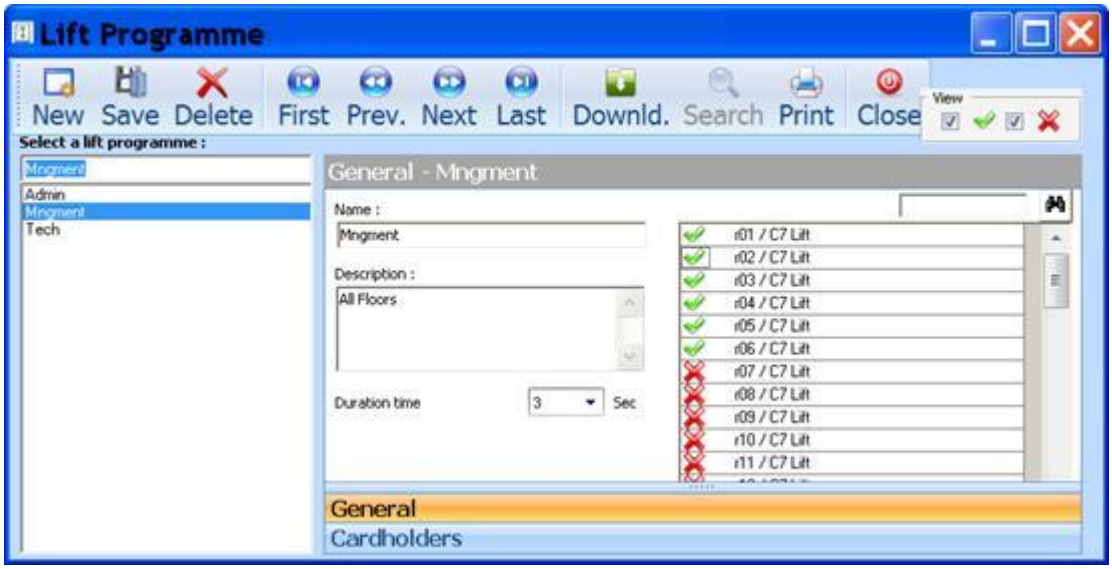
See: *Lift Module - Basic Concept and Example*

Lift Module Capacity – Using extension card with additional Relays

5.2.1 LIFT PROGRAMME

This screen defines the different Lift Programmes which will determine what floors are accessible. Only one Lift Programme may be associated with a cardholder at any one time (in the *Cardholder/Personal* screen).

Note: Using the Multi-Site Module, a cardholder can be associated with one Lift Programme per site



Name

Free text

Description

Free Text

Duration Time

Enter the time during which the lift button relays are to be activated after a badge is passed at the Lift reader

List of Lift relays

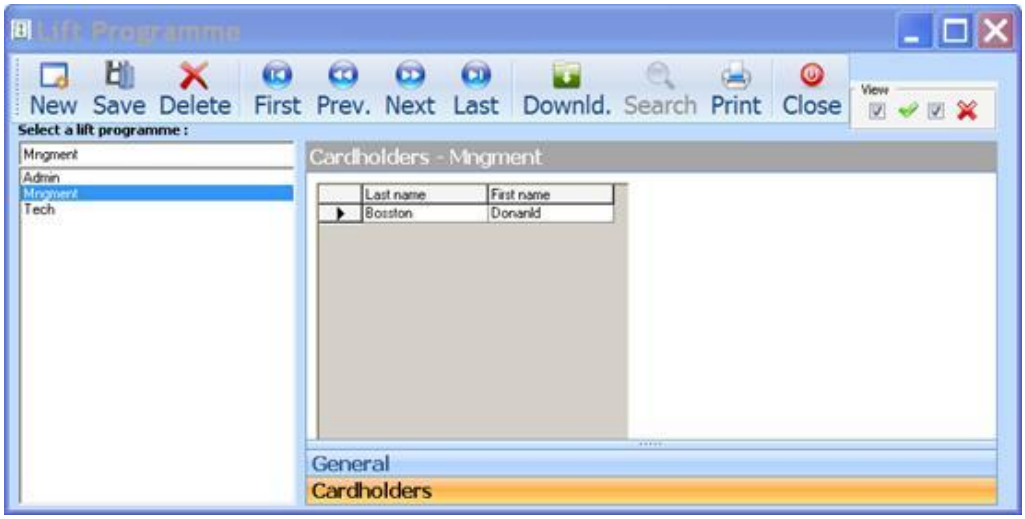
All possible relays for each controller may be listed (see **View Button** below)
The ✓/✗ symbol indicates whether this relay should be included in this Lift Programme. The status may be toggled by clicking.

View Menu

Check the ✓/✗ symbols in the View Menu to display the relays that are activated/not activated in this Lift Programme. If both symbols are checked then all relays are listed.

5.2.1.1 LIFT PROGRAMME CARDHOLDERS TAB

Displays all cardholders associated with this Lift Programme (or with this Lift Authorization Group, if these are defined – see *Lift Authorization Groups*)



View buttons: The View menu is only active for the General Tab
– it has no effect in the Cardholder tab

5.2.2 LIFT AUTHORIZATION GROUPS

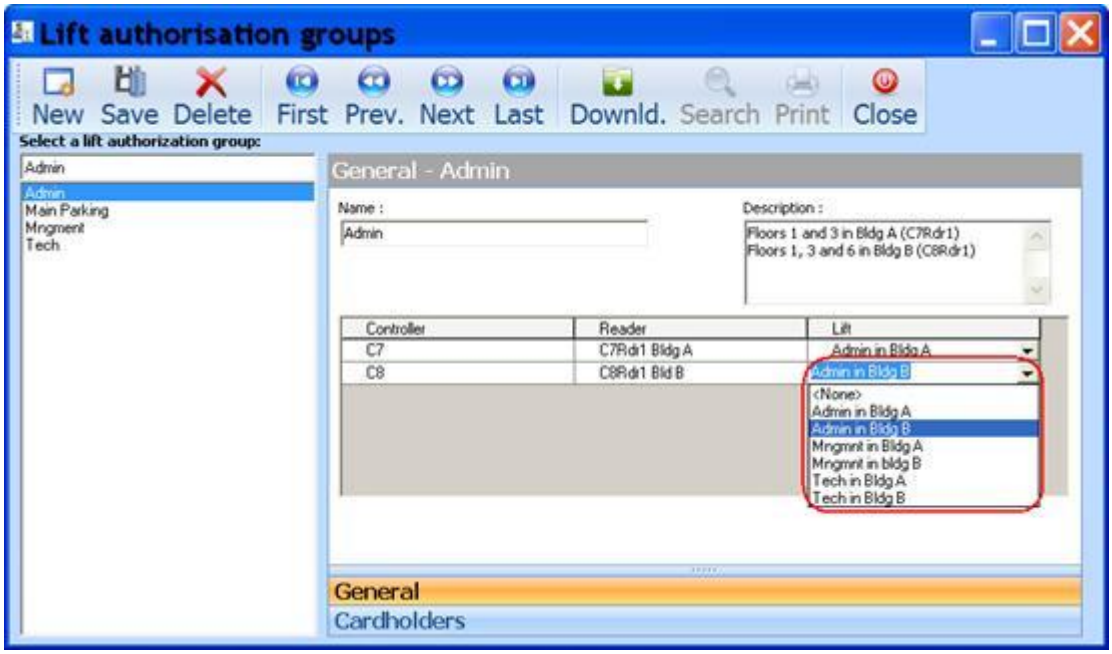
Setting up Specific Authorizations for each reader The option 'Different lift program for each reader' option must be selected in the *Tools/Options/Server* screen in order to use this option. Once the option is selected (and the system is restarted), Lift Authorization Groups can be set up for each reader using the screen below.

Note: This option only appears in the server computer.

Lift Authorization Groups allow the user to create groups of Lift Programmes so that each separate lift will use a specific Lift Programme that is associated with the cardholder who passes his badge at the Lift reader.

The Lift Authorization Groups option is particularly useful for installations handling large multi-storey buildings.

- Separate Lift Programmes are set up in the *Lift Programme* screen. Each programme is a definition that will apply to cardholders of the group when they use the lifts in each building - e.g. 'Group1_BldgA', 'Group1_BldgB', and so on.
- The Lift Programmes are then grouped in Lift Authorization groups using the screen below.
- Individual cardholders making up that group then have the Lift Authorization Group associated with them using the *Cardholders/Personal* screen.



A table shows all lift controllers and the readers associated with them, for the selected Lift Access Group.

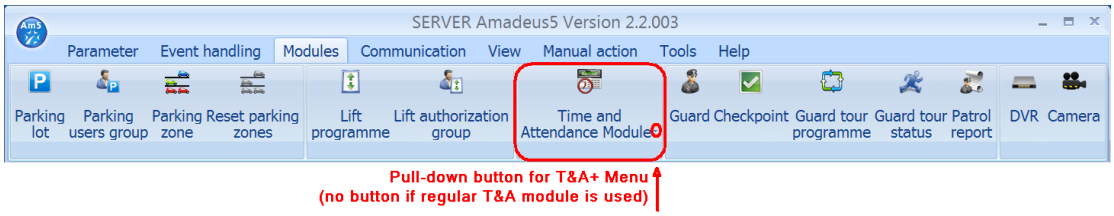
The dropdown in the 'Lift' column allows the user to assign a particular Lift programme to that reader.

5.2.2.1 LIFT AUTHORIZATION GROUPS/CARDHOLDERS TAB

This screen shows the Cardholders currently associated with the selected Lift Authorization Group.

All Lift Authorization groups are shown in the Navigation window. Clicking on one results in the Cardholders associated with that Lift Authorization Group to be listed in the Data window.

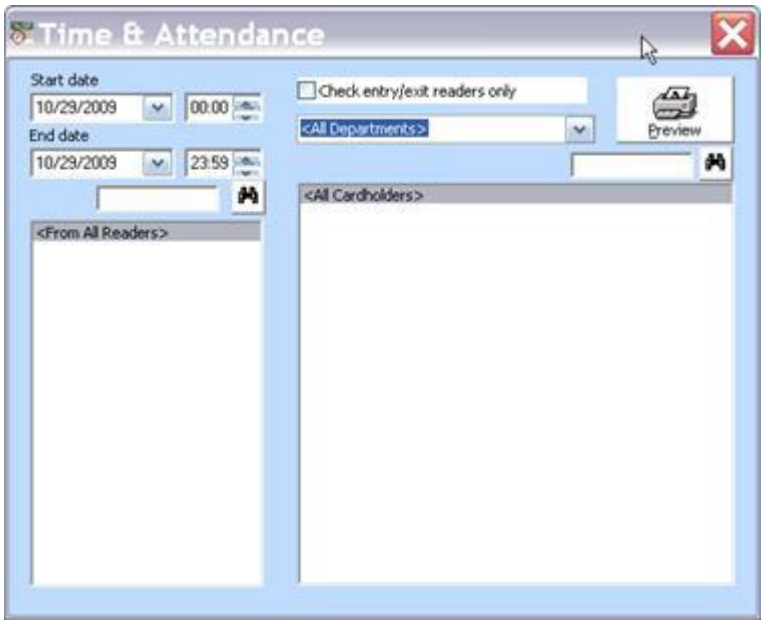
5.3 TIME AND ATTENDANCE MODULES



In this section:

- *Time Attendance Screen – 'Standard T&A' Module*
- *T&A Screens - 'T+' Module*

5.3.1 TIME ATTENDANCE SCREEN – 'STANDARD T&A' MODULE



Start, End date

Enter the period to be covered by the report

Times

Date selections can be limited to start/end at particular times in the day.

Search Field

Highlight readers that have names corresponding to the search field

Reader List

If one or more readers are selected, then the T&A report will be generated ONLY from transactions at the selected readers.

Check entry/exit readers only

If this box is **NOT checked**, the report will use ONLY the first and last transactions each day. All other transactions will be ignored.

If the box **IS checked**, the report will be generated ONLY from readers that are configured as '**Entrance Reader**' and '**Exit Reader**' readers in the *Reader/General* screen.

The report will provide a total of the accumulated times in pairs of 'entrance' and 'exit' transactions.

Note: If the T+ Module is in use, the check box 'Check entry/exit readers only' is not present, as T&A readers for the 'T+' module are defined in the *Reader/General* screen as '**Entrance Reader/Exit Reader**'

<All departments> dropdown

User can select specific departments to produce the report only from those selected department/s.

Search Field

Search for specific Cardholder

Cardholder list

<all cardholders>. .

User can select particular cardholder/s to appear in the report.

Preview button

Clicking the Preview icon generates a screen report using the parameters selected. The user can use the icons in the screen report to export, print, copy, and search and view the resulting report.

5.3.2 T&A SCREENS - 'T+' MODULE

When the Time & Attendance T+ module is installed, the User has the following menu:

(Operational screens) -	*Time Attendance*
	Transaction Wizard
(Setup screens) -	*Categories*
	Transactions
	Daily Shift
	Personal Contract
	Holiday

5.3.2.1 TIME AND ATTENDANCE QUERY

Clicking on 'Time and Attendance' in the T&A + Menu opens a screen that allows input of parameters for a T&A Transaction Query.

Start Date/Time, End Date/Time

Set the Start and End parameters for the query

Department Pull-down

Select the Departments to be included in the query

Navigation Pane

Select the Cardholders to be included in the query

Search window

Enter a name or part of a name – the first instance of this name will be highlighted

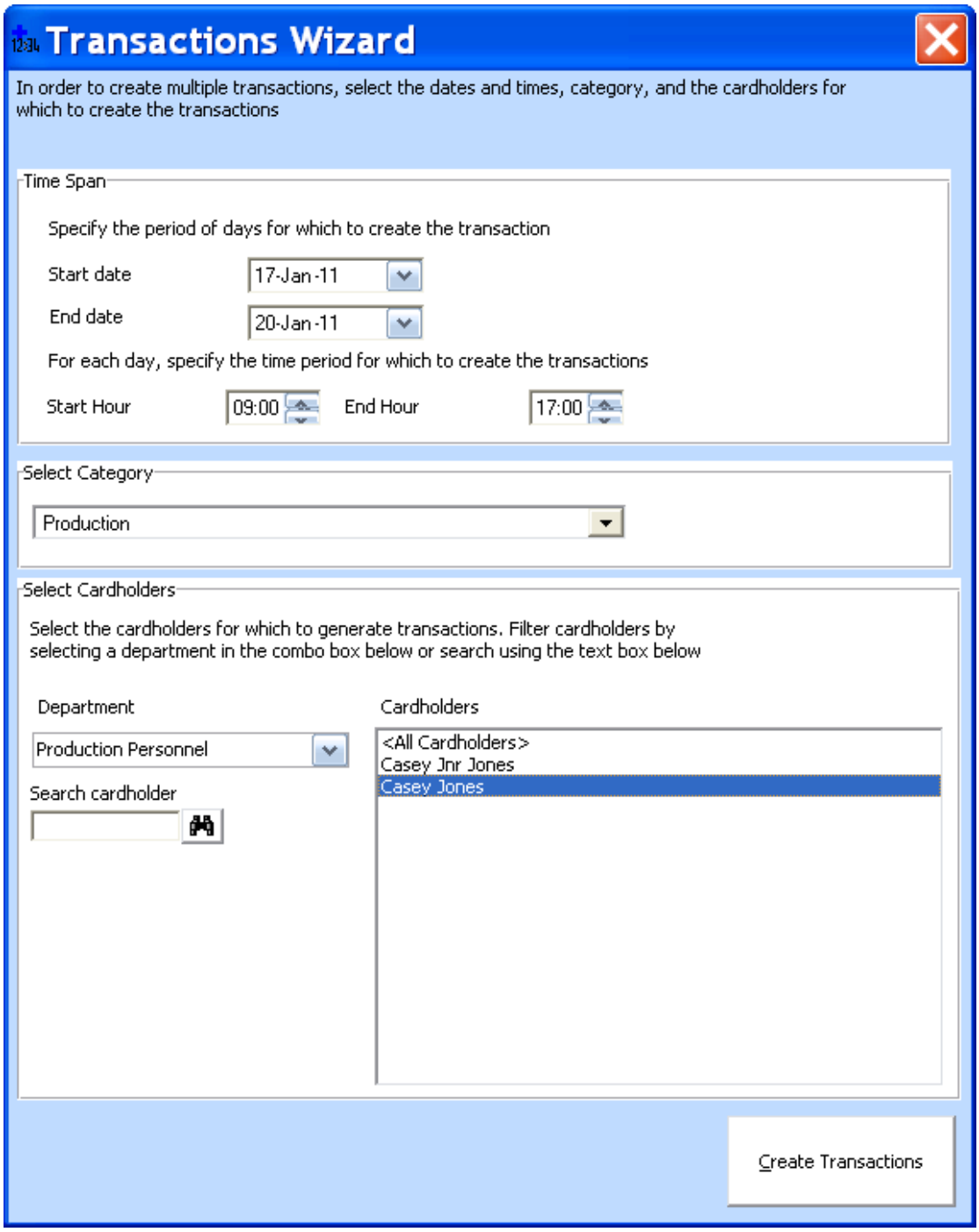
Preview button

Presents a screen preview of the selected T&A transactions

Late Arrival button

Limits the report to contain only Late arrival transactions

5.3.3 T&A TRANSACTION WIZARD


Transactions Wizard
In order to create multiple transactions, select the dates and times, category, and the cardholders for which to create the transactions
Time Span
Specify the period of days for which to create the transaction
Start date
17-Jan-11
End date
20-Jan-11
For each day, specify the time period for which to create the transactions
Start Hour
09:00
End Hour
17:00
Select Category
Production
Select Cardholders
Select the cardholders for which to generate transactions. Filter cardholders by selecting a department in the combo box below or search using the text box below
Department
Production Personnel
Search cardholder
Cardholders
<All Cardholders>
Casey Jnr Jones
Casey Jones
Create Transactions

Start date / End date

Start Hour / End hour

Select the start time and date and the end time and date of the transactions to create.

Category

Select a Category for the transactions to be added, as defined using the *Transaction Categories* screen.

Note: In order to use the Transaction Wizard, specific Transaction Codes must be defined in advance for 'start' and 'end' transactions for the Category, using the *Transactions* screen

i.e. the default 00 and 01 Transaction Codes will **not** generate transactions through using the Transaction Wizard

Cardholders

Select cardholders for whom transactions will be generated

Department

Select the Department whose cardholders are to be included

Create transactions

Click to create the transactions.

These transactions will be inserted into the log of T&A transactions, so that the resulting reports will include these transactions (marked with a '*').

5.3.3.1 TRANSACTION CATEGORIES

Name

Free text

Description

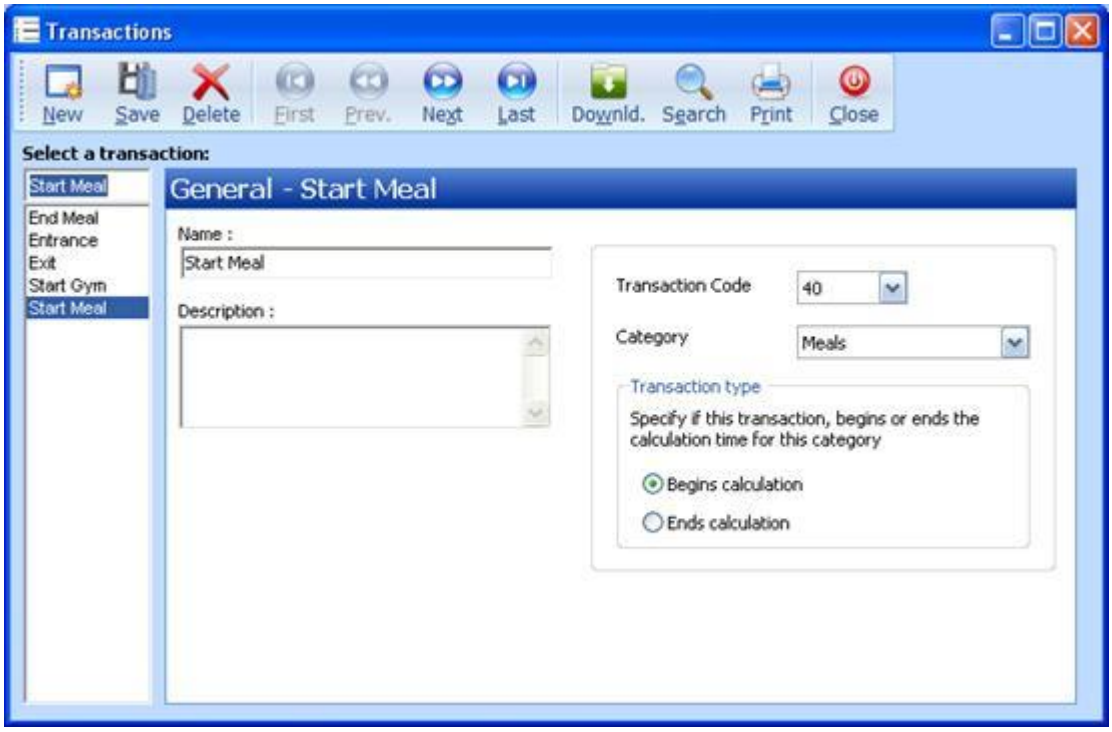
Free Text

Category Type

Use a radio button to select if this is a 'Work time' (i.e. 'paid') or 'Non-working time' (i.e. 'paid') category.

All categories will be shown on the report in their own subheadings. Non working time will not be included in the total time.

5.3.3.2 TRANSACTIONS



Name

Free text

Description

Free text

Transaction code

When a cardholder is granted access at a specific reader, a transaction code is associated with the transaction.

This code can be entered on readers that have keypads, or it is defined as the default transaction code for the reader in the *Reader/Miscellaneous/Badge Format* screen). (If the reader has a default code defined for it in this screen, it is overwritten if a code is entered on a keypad.)

This transaction code field allows the user to assign names to the available transaction codes and each code can be associated with a category (see next field) against which time can be accumulated.

Two transaction codes exist per default and cannot be changed (only their names can be edited):

- Entrance with **'0'** is the default Transaction code for starting **general** working time (i.e. work in this category does not have to be separately accumulated).
- Exit with **'1'** is the Transaction code used as a general code to signal the end of work (e.g. at the end of the day).

Category

Select a category to be associated with this transaction code from the dropdown list. Transactions with the transaction code set in the field above will affect accumulation of time against the category selected here.

The list of available categories is defined in the *Transaction Categories*screen.

Transaction type

Choose here whether the transaction code will begin the accumulation of time allocated to the selected category or will end the accumulation.
Note: Clocking with any new transaction code which begins a category will always signal the end of work for the previous category.

5.3.3.3 CONTROLLER/READER GENERAL TAB SCREEN (T & A SETUP PARAMETERS)

See *Readers/General*

5.3.3.4 READERS MISCELLANEOUS (TRANSACTION CODE PARAMETERS)

When using the T&A modules, a default transaction Code can be set for each reader.

- See *Readers/Miscellaneous/Badge Format Tab* for regular fields

READER DEFAULT TRANSACTION CODE

This is the code that will be associated with transactions from this reader. The following conventions are used

IMPORTANT: Note reserved Transaction codes*

00* (default): Entrance

'Clock ON' (i.e. Start calculation) for normal T&A – no specific Work Category.

01*: Exit

'Clock OFF' (i.e. End calculation) for normal T&A – no specific Work Category

02-19, 30-97

Available – can be assigned to readers as their default transaction codes, and associated with categories.

Note: These codes may also be used to trigger reflexes.

Care should be taken not to create conflicts with these definitions.

20-29*

Reserved - These codes are pre-defined in the controllers to execute specific actions (e.g. code 26 arms an Alarm Zone by a Supervisor, code 27 disarms an Alarm Zone)

98,99*

Reserved with special meanings, such as 'Supervisor transaction'

Note: A code typed by the cardholder at the keypad reader will overwrite the default transaction codes.

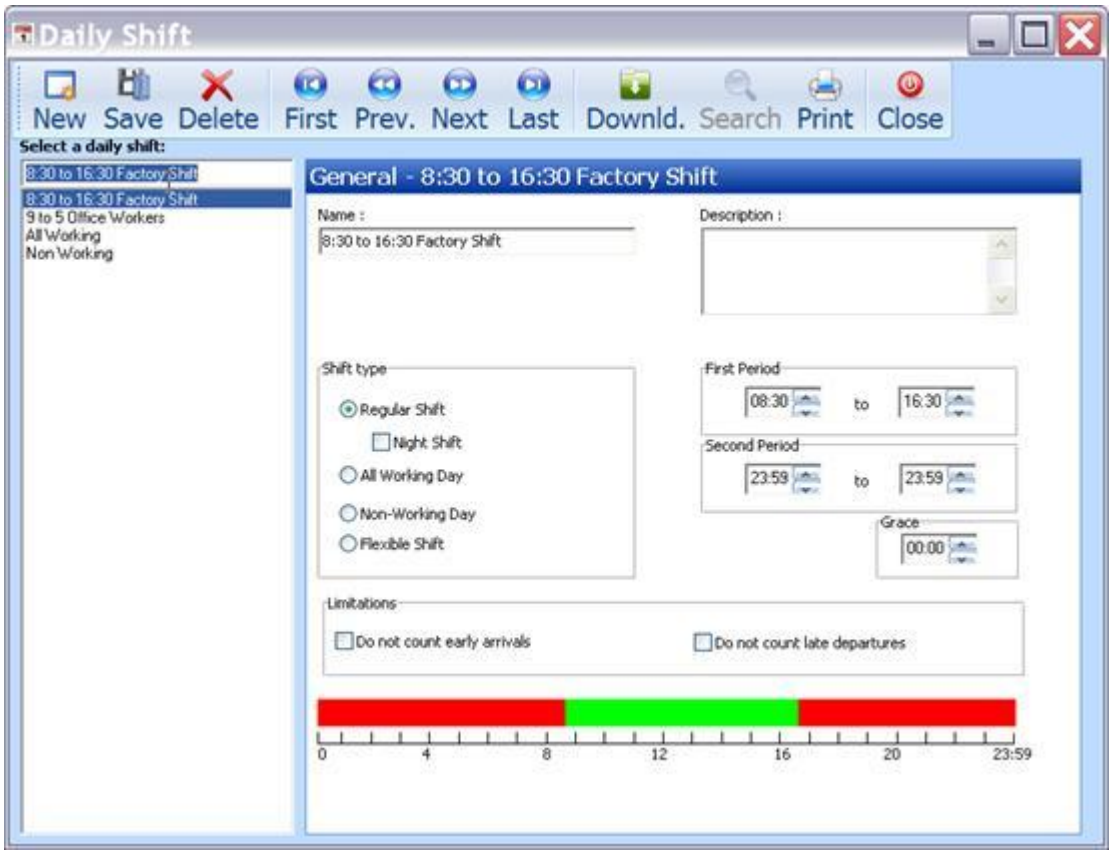
5.3.3.5 DEPARTMENT

(See main description *Department*)

5.3.3.6 CARDHOLDER GENERAL TAB SCREEN

Departments are used to associate cardholders with specific *Personal Contracts* and to provide cardholder reports sorted by department.
This is done using the *Cardholder/General* screen.

5.3.4 T&A DAILY SHIFT



By default, two daily Shift definitions are in the system – '**All Working**' and '**Non Working**'. These two Daily Shift definitions should not be deleted nor their parameters changed (but they may be renamed).

Name

Free text

Description

Free text

Shift type (radio buttons)

Select :

Regular Shift – Standard working time for normal work should be entered in the Start and Stop times. The results will be displayed as a green bar within two red bars on the time line at the bottom of the screen.

All Working Day – all time worked will be considered normal time.

Non-Working Day - all time worked will be considered additional time.
Flexible Shift – no times need be set – the amount of time set in the 'Flex' time window represents the normal time that will be allocated. Any excess will be additional time, and any shortage will be missing time.

Start and Stop times – First and Second Period.

Two Periods are provided in case the shift is made up of two distinct work periods. If there is just one work period, define this in the First Period, and set the Second Period to 23:59 23:59.

Grace Time

Enter the maximum time that an employee who arrives or leaves, late or early, may be credited without penalty.

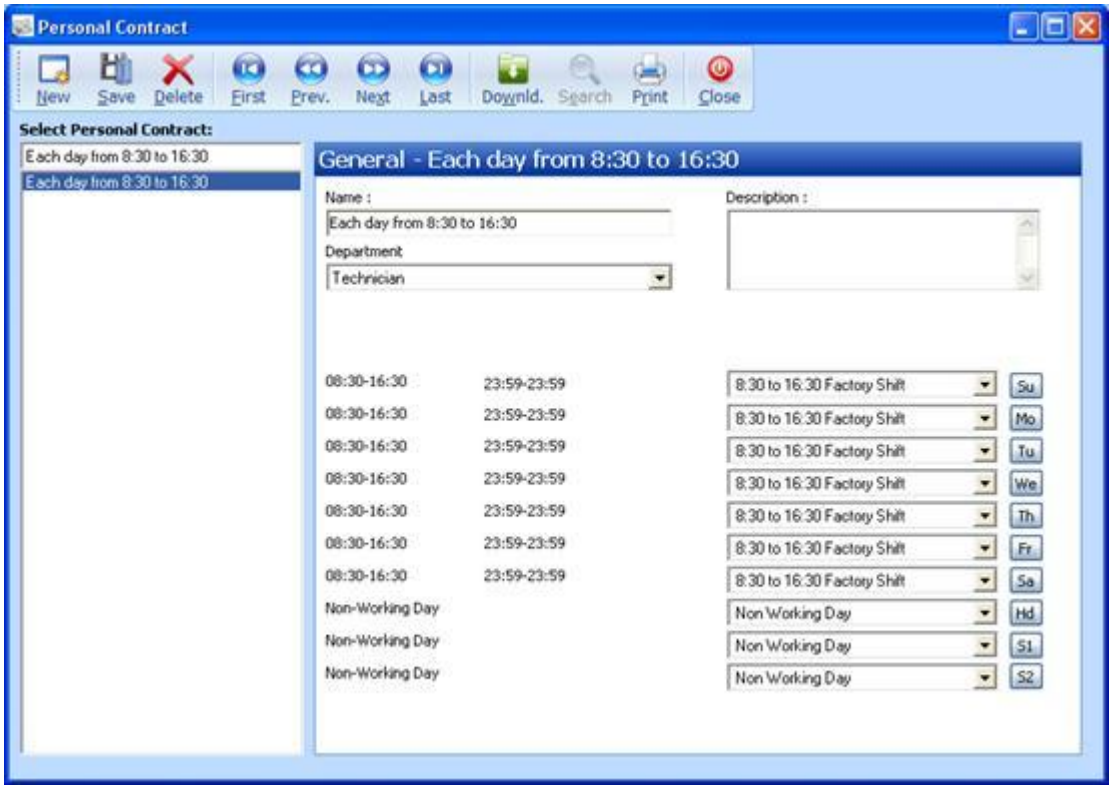
Limitations

'Do not count early arrivals' and/or 'Do not count late departures' should be checked if time is not to be credited in these cases. This will prevent such instances being reported on the LATE report.

Time line

The red and green areas give a graphic representation of the standard (green) time and additional (red) time as defined for the shift.

5.3.5 T&A PERSONAL CONTRACT



Navigation Pane

Select a Personal Contract or press New to define a new Personal Contract.

Name

Free text

Description

Free text

Department

Select the Department for which this Personal Contract must be applied.

Note: A department can only have one Personal Contract used by its members. A Personal Contract cannot be used by more than one department.

Definition of weekdays, weekends holidays and special days

A Daily Shift definition must be selected from the list of daily Shifts that have been defined. Each day of the week ('Su' to 'Sa') must have its Daily Shift.
Different Daily shifts may be attributed to Holidays ('Hd'), Special day 1 ('S1') and Special day 2 ('S2'). The dates of these 'T&A Vacations' are defined in the '*Holidays*' screen.

5.3.6 T&A VACATIONS

Note: This Vacations Tab appears only if the T&A T+ Module is enabled.

See *Cardholder/Vacations*

5.3.7 'T+' - SUMMARY

T+ Module	Description
Detail level	Time is allocated according to the transaction codes assigned to each reader and the work categories associated with those codes. This allows accumulation of standard work time as well as multiple different categories of working- and non-working time. Working time is expressed as normal and additional (overtime). The T+ module allows multiple individual categories of working time to be accumulated. Categories are user-defined, and examples might include 'Training', 'Hazardous tasks', 'Off-site work', etc. Non-working time can similarly be recorded in categories, such as 'Gym', 'At-work Baby care', 'Time off', etc.
Designated readers	T&A transactions are only captured at readers designated as 'Entrance Reader\Exit Reader'.
Reporting	Report of <All cardholders>, <an individual cardholder>, by date.
Editing missing transactions	Individual manual transactions can be entered. (Batch transactions may be entered using the 'Transaction Wizard' screen.) Manually entered transactions are marked with * in the report, and can be edited. Real transactions resulting from card transactions cannot be edited. If actions are edited, the operator must exit and re-enter the report screen to force re-calculation.

5.3.8 T&A FILE EXPORT FACILITY

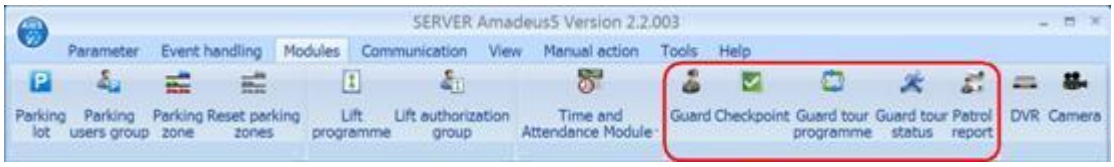
A simple method for integrating the main access control application with external Time & Attendance (T&A) systems is achieved by exporting the T&A data gathered by the main application into simple text files, one text line/record per event.

These files are aimed to be used by 3rd party T&A applications and therefore the text records should be ideally written in the format required by these external systems. For that purpose, an external utility program 'TA.exe' (delivered with the application) is provided. This utility exports the relevant T&A events to text files in practically ANY required format. The format settings are done by the user using a simple, easy to use definitions screen.

For details, refer to the 'Time&Attendance file export to external applications', Document No. 10UE522.

5.4 GUARD PATROL MODULE

The Guard Patrol function allows the user to define one or more Tours, consisting of Checkpoints that a Guard must visit in sequence, and within defined time limits.



A Guard Patrol is a specific Action that consists of a user-defined path of checkpoints reached by an authorized employee - the guard - within predefined deadlines. Arrival at a checkpoint is signalled via input activation or reading of a badge and these are logged on the PC. If the guard doesn't signal his arrival at a specific checkpoint within the predefined time deadline, an alarm is raised at the PC. Guard Tours are based on the following:

- **Guard** - Only cardholders who are designated as Guards (*Modules/Guard* screen or *Cardholders/General* screen, select Type=Guard) may be associated with Guard Tours
- **Checkpoints** – defines the points and the events that can be used in defining a Guard tour – these can be contacts connected to Inputs, or Readers and the associated type of reader transaction to be used (e.g. normal access, access with PIN input etc) (*Modules/Checkpoint* screen)
- **Guard Tour Programme** – defines the different Guard Tours, including what Process/es are to be initiated during the Tour, the Checkpoints making up the tour, and the relative timing between checkpoints (*Modules/Guard tour programme* screen)
- **Guard Tour Status** – Screen query showing the current status of an in-progress Guard Tour (*Modules/Guard tour status* screen name + link)
- **Patrol Report** – pre-formatted report giving details off completed or in-progress Tours (*Modules/Patrol report* screen)

Several tours can be defined and run in parallel. The event log shows individual transactions, and the Patrol Reports function allows information to be consolidated to show details or summaries of the patrol activity.

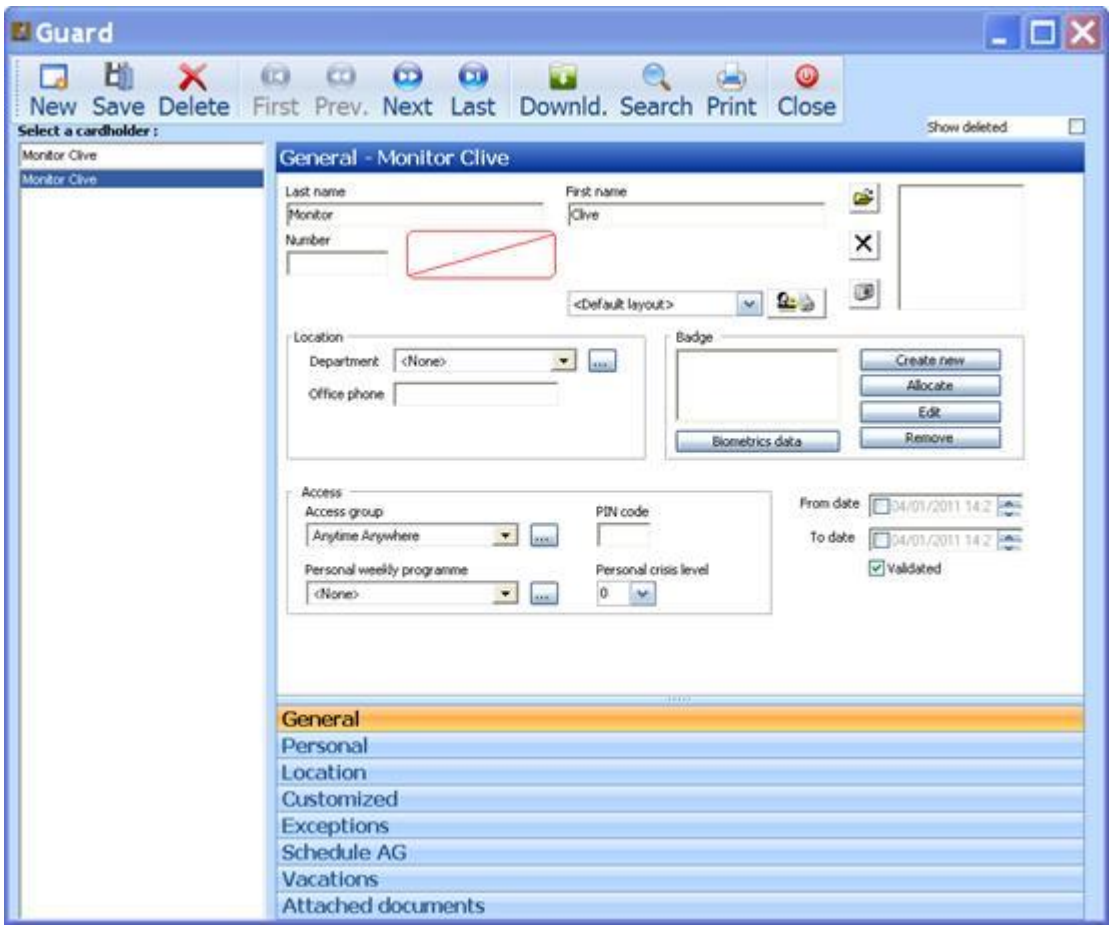
Before a Guard Tour can be initiated, an Action must be defined in which the Action type is '**Start Guard Tour**', the required **Guard Tour** is selected from the list of defined Guard Program Tours, and the **Guard** is selected from the list of cardholders defined as Guards.

Once these parameters are defined and the Action is saved, the Tour can be defined as a Process and started by a user Manual Action, a Global Reflex, or by the Scheduler, etc.

5.4.1 GUARD

The Guard screen is used to create new Guard records and update Guard information. It uses the normal Cardholder screen layout, but the type 'Guard' is pre-selected.

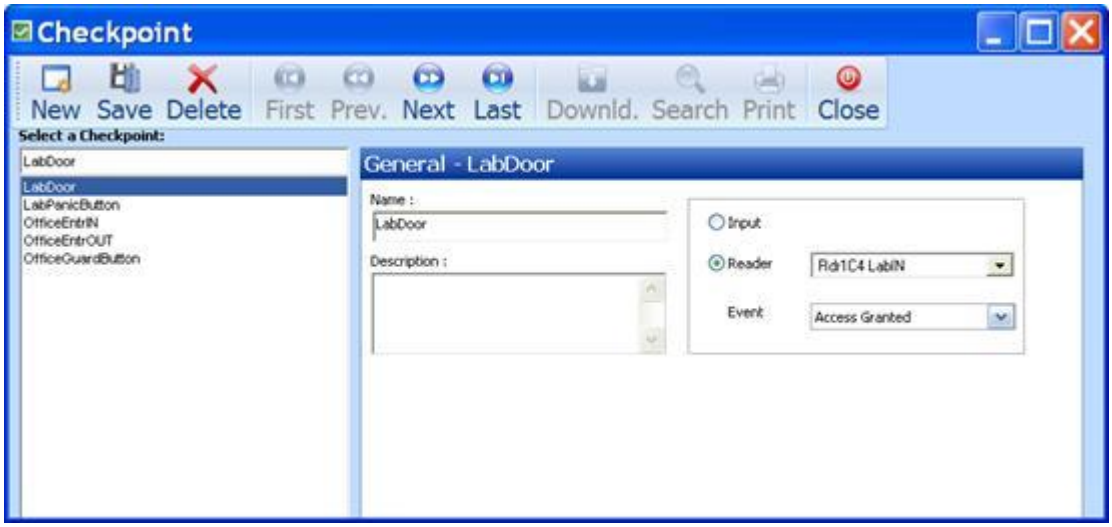
> Note: By using the Authorization Level screen, a user can be set up with permission to access the Guard screen and not the regular Cardholder screen. Such a user can define and update Guard records, without being able to access other cardholders' records.



For details, see *Cardholder* screen

5.4.2 CHECKPOINT

Checkpoints, as well as the inputs and/or readers that are used to confirm the arrival, are defined in this screen.



Name

Free text

To define a new entry, enter a unique name and click 'New'

Description

Free text

Input, Reader

Use the radio buttons to choose whether this checkpoint is a contact or a reader.

- If 'Input' is selected, select the Input to be used from the list of all Inputs
  The Input selected must be armed by a Weekly Programme before it can be used as part of a Guard Tour
- Selecting 'Reader' activates a drop-down showing all readers, and a reader can be selected from the list of all readers in the system

Identifying the Guard: Using an input (such as a contact that the guard presses) to input the guard's arrival at a checkpoint does not identify **who** is making the signal. If identity is required from a security point of view, then a reader must be associated with the checkpoint.

Event

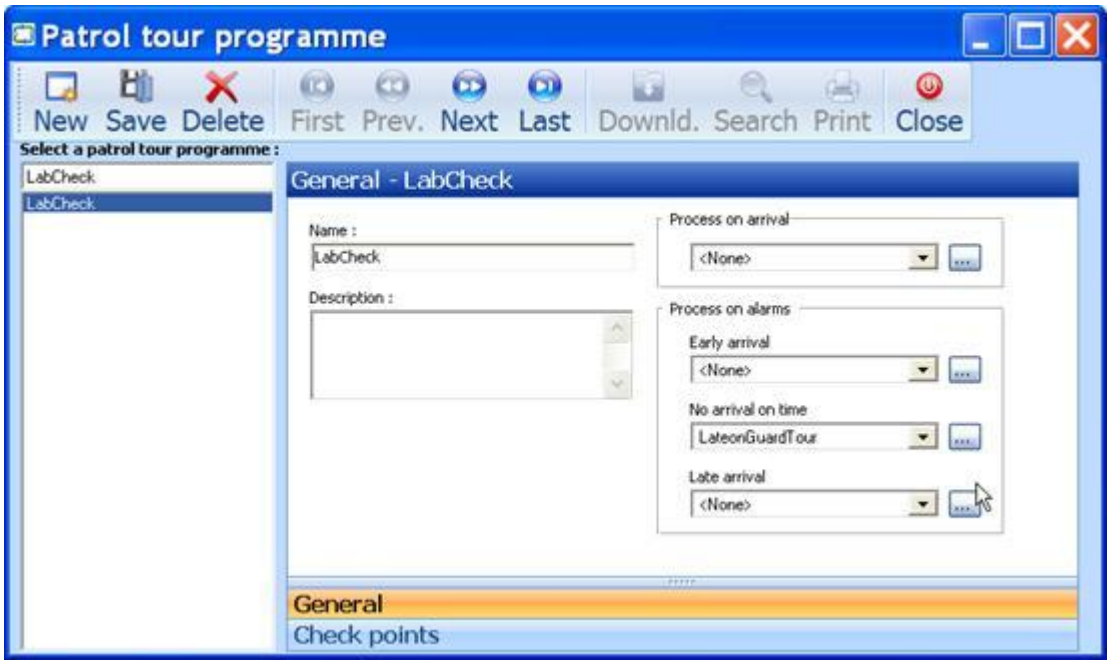
Choose event in the list

- Input
  - Start of Alarm /End of alarm
- Reader
  - Any event
  - Access granted
  - Access granted +duress code
  - Access denied (if reader)
  - Access denied + unsuccessful attempts

Example of access denied: The guard does not have access to the computer room, but must pass his badge at the computer room door reader to register his arrival

5.4.3 GUARD (PATROL) TOUR PROGRAMME – GENERAL

To complete the definition of the guard tour, this screen defines the arrival time at each checkpoint relative to the start of the tour, including allowance for early (-) and late (+) arrival for each checkpoint.



Name

Free text

To define a new entry, enter a unique name and click 'New'

Description

Free text

Process on arrival

If required, define the process to be initiated when arrival is signalled.

Use dropdown to select a process from the list of all defined processes.

To define a new process, click [...] to open the *Process* screen

Process on alarms

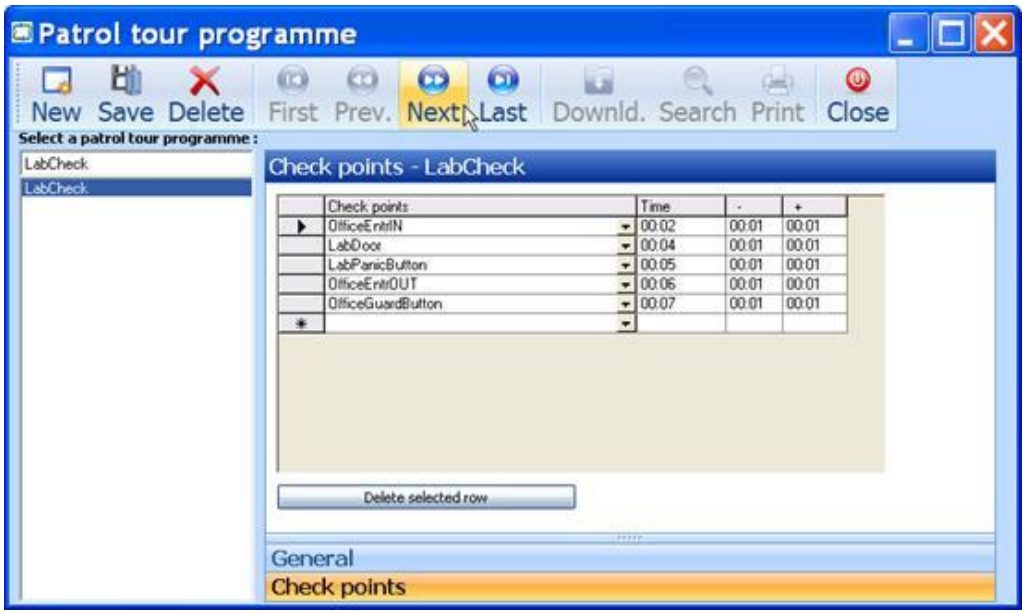
If required, define what specific process/es must be invoked if the Guard Patrol programme satisfies any of these conditions:

- **Early arrival**
  Process to invoke if Patrol point arrival before
  (Time – grace time allowed before)
- **No arrival on time**
  Process to invoke if no arrival signalled between (Time +/- grace time)
- **Late arrival**
  Process to invoke if Arrival signalled after (Time + grace time allowed after)

5.4.3.1 GUARD (PATROL) TOUR CHECKPOINTS TAB

The Guard Tour Programme/Checkpoints tab allows the user to select Checkpoints (previously defined) and their expected arrival times.

See *Guard Tour Concept and Example*



Table

List of all checkpoints to be included in the selected tour programme, with Check point name, Time (relative to start of the tour) and allowance time (-), (+) in Hours and minutes.

To define the tour:

- Select a row on which to enter/edit a Checkpoint. The selected row is shown with a ► symbol. A Checkpoint can be added by clicking on the row marked * Note: A particular Checkpoint can only occur ONCE in a Tour
- Use the dropdown ▼ to choose a checkpoint to add to this tour from the list of previously-defined checkpoints
- Enter the Time (relative to start of the tour) and allowance times for this checkpoint (- = before, + = after)
- A pencil symbol indicates that information on a line has been changed but not yet saved.

Time Entries: Times are relative – that is, the 'Time' entry is the time from allowed from the moment that the Tour was started. The + and – times are allowances before and after the Time entry, that define grace times for the checkpoint.

After adding a Checkpoint, no **save** is required.

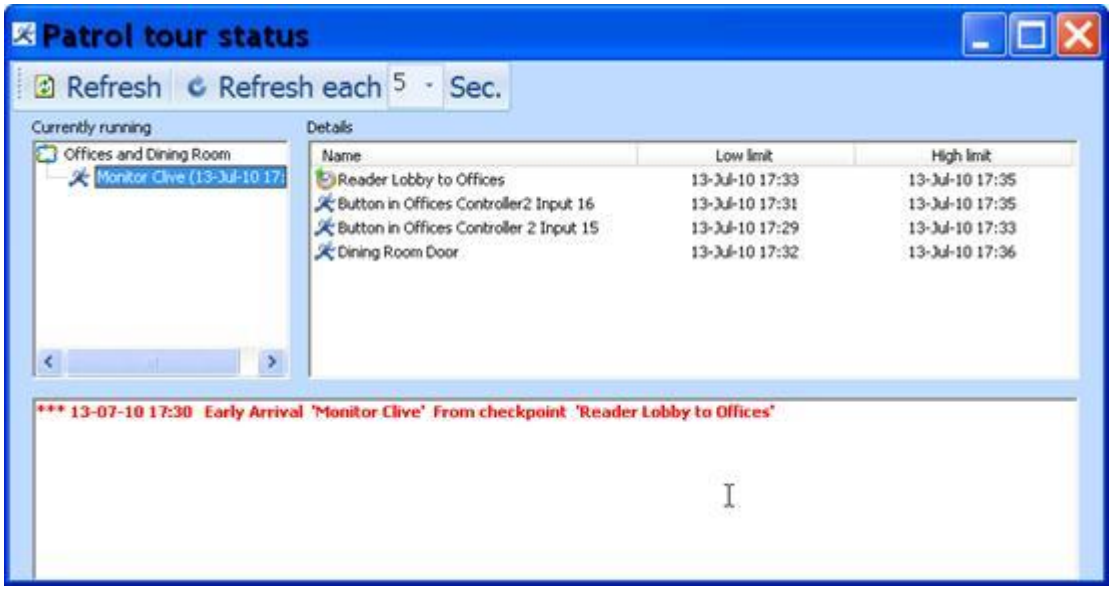
Delete selected row

A row can be deleted by selecting it and clicking on this button

Note:

If difficulty is experienced in entering times, check how the PC is set up to display Time (Control Panel/Regional and Language Options /Customize Regional Options /Time) Make sure that a 24-Hr option for the Time display is selected (H:mm or HH:mm)

5.4.4 GUARD (PATROL) TOUR STATUS



Refresh, Refresh each..

Click to refresh immediately, enter interval for automatic refresh

Currently running

List of all patrol tours running. Any running tour is highlighted

Details

For the selected tour, all checkpoints are listed, with their earliest and latest programmed times. (Absolute time as the tour progresses, not relative time as entered when defining the tour)

Specific icons show the status of each checkpoint:

Not arrived yet (waiting for the Guard)

Arrival (on time) (Guard arrived)

Early arrival (Guard arrived early)

Late arrival (Guard arrived late)

No arrival on time (inside the limit of time)
(Guard did not arrive within the allowed time)

Log window

The log window displays the tour events related to the highlighted tour in actual times

End of Tour

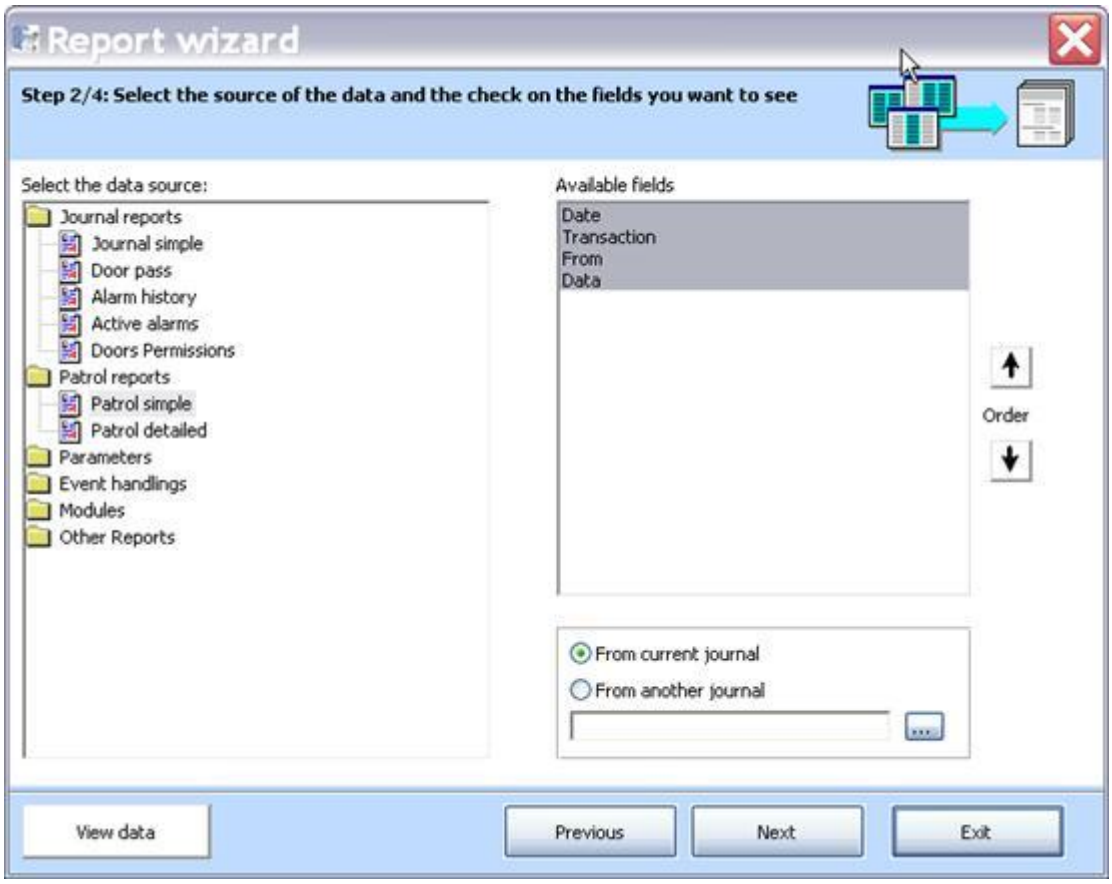
The Tour is assumed to end (15 Minutes after (Last programmed time + grace time))

5.4.5 PATROL REPORT

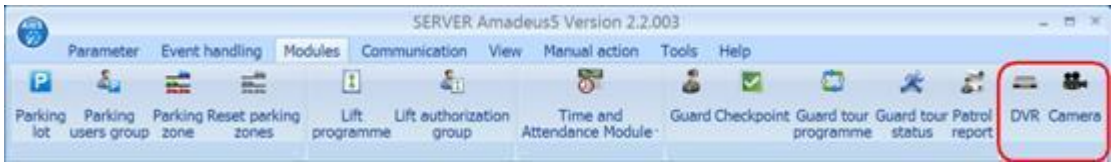
2 pre-formatted reports giving details of the Guard Patrol are available (Patrol Report simple/detailed).

The report structure can be modified in the same way as any report produced by the Report Wizard.

(see *Report Wizard*).



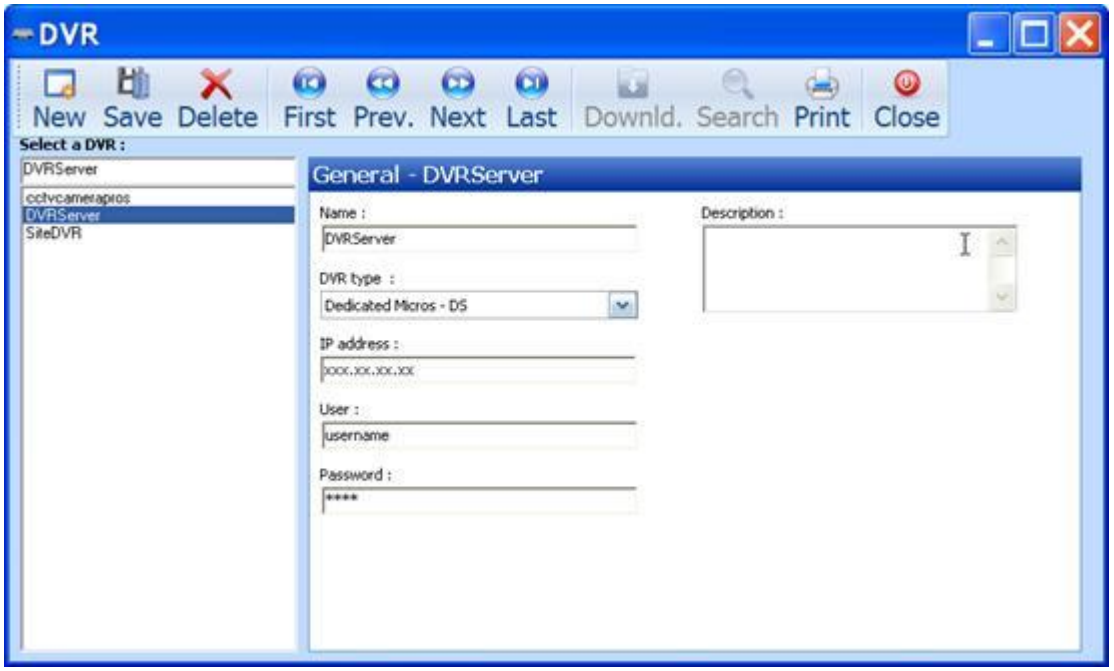
5.5 VIDEO MODULE



In this section:

- *DVR*
- *Camera*

5.5.1 DVR



Name

Free Text

Description

Free text

DVR Type

Select DVR type to be used from dropdown (List of DVRs currently integrated with the system)

IP address

Enter the IP address of the DVR

Note – For IP Cameras that do not require DVR, choose 'OnSSI' as DVR type

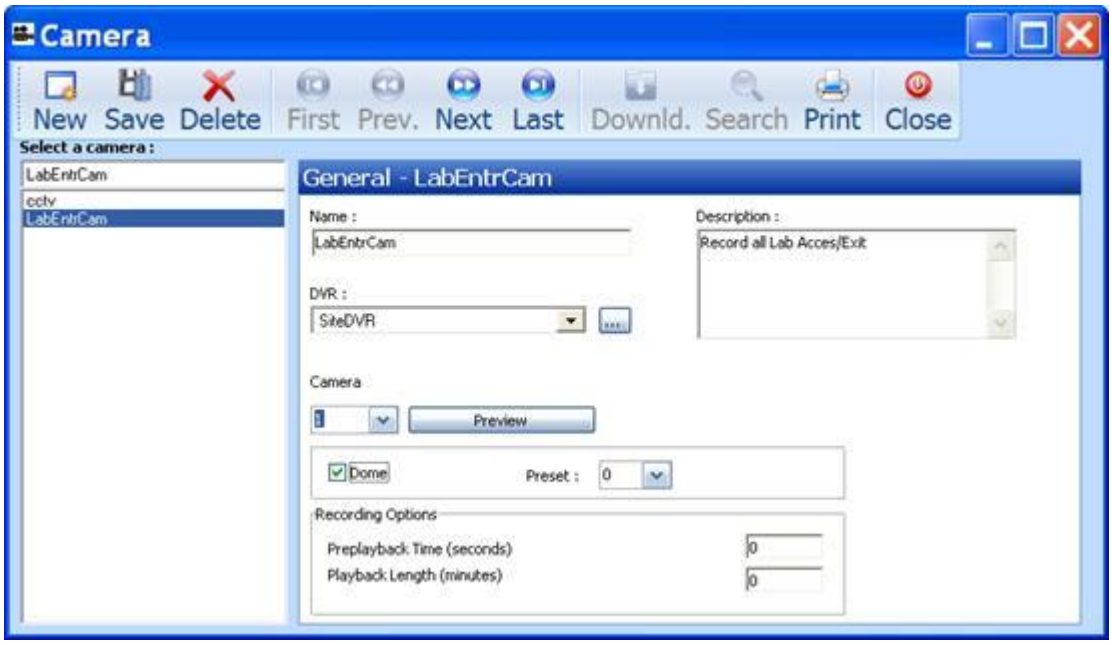
User

Enter the username used for logging on to the DVR, if required

Password

Enter the password used for logging on to the DVR, if required

5.5.2 CAMERA



Name

Free Text

Description

Free Text

DVR

Select which DVR is to be associated with this camera (from list of defined DVRs)
Press […] to define a new DVR)

Camera

Specify the camera number that is associated with this camera
(i.e. the Input on the DVR to which this camera is connected)

Dome

Check if this is a Dome camera (i.e. with Pan-Swivel-Tilt (PST) capability)
If Dome is selected, then preset position must also be selected

Recording Options

Allows the user to specify parameters for playback of recordings –
(playback is enabled by right-clicking on the Video icon in the active log, or on the **View Data** button in the Report screen when a Video icon is shown)

Preplayback Time

Enter no. of seconds of the recording to play back before the event that triggered the playback.

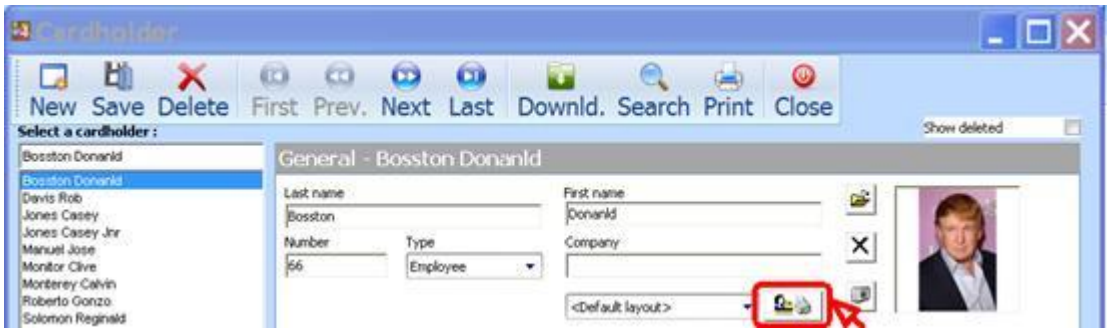
Playback Length

Enter no. of minutes of the recording to play back after the event that triggered the playback

5.6 BADGE PRINTING MODULE

The Badge Design Icon is only shown in the *Cardholder/General* screen when the module is licensed ('BP' in the dongle).

The Badge Printing module provides users with the ability to print badges directly from the *Cardholder/General* screen to a designated printer. It also allows customization of badge layout and appearance, storing multiple badge designs, and choice of which design to use for a particular cardholder when printing a new badge.



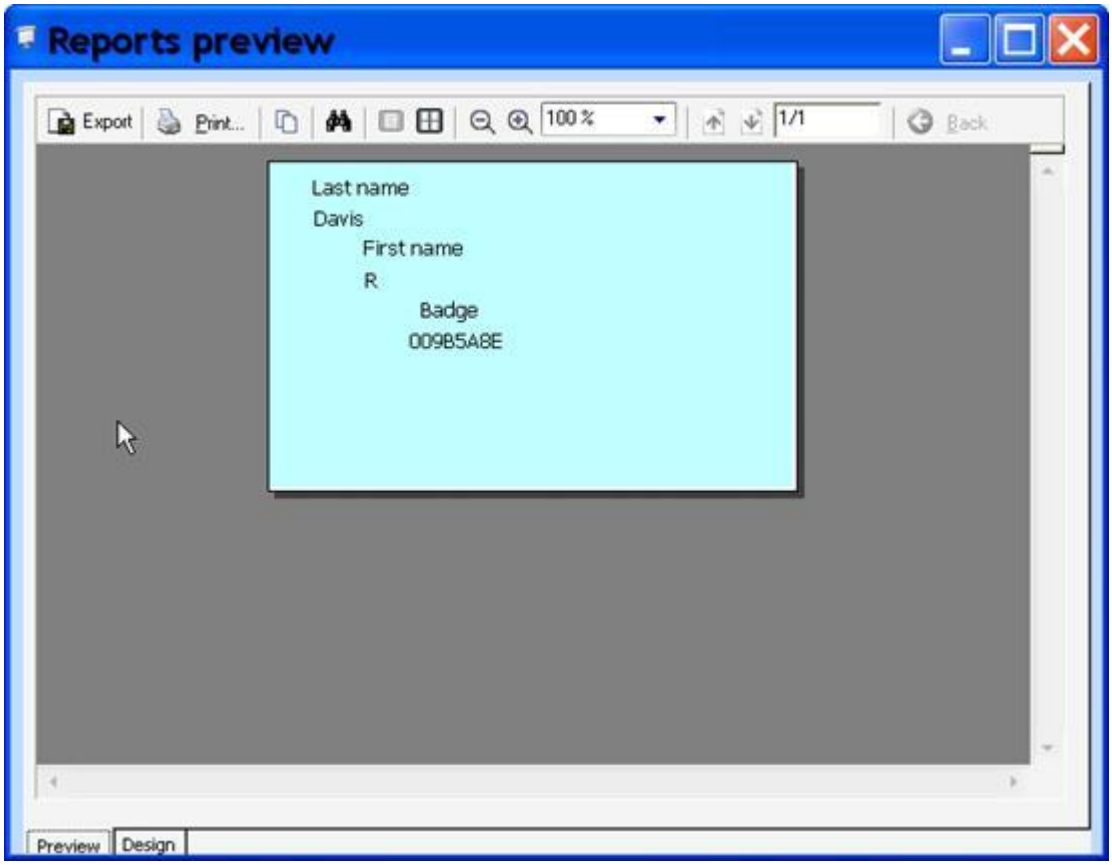
The Badge Printing Module consists of 2 screens:

Badge Printing Preview

Badge Printing Design

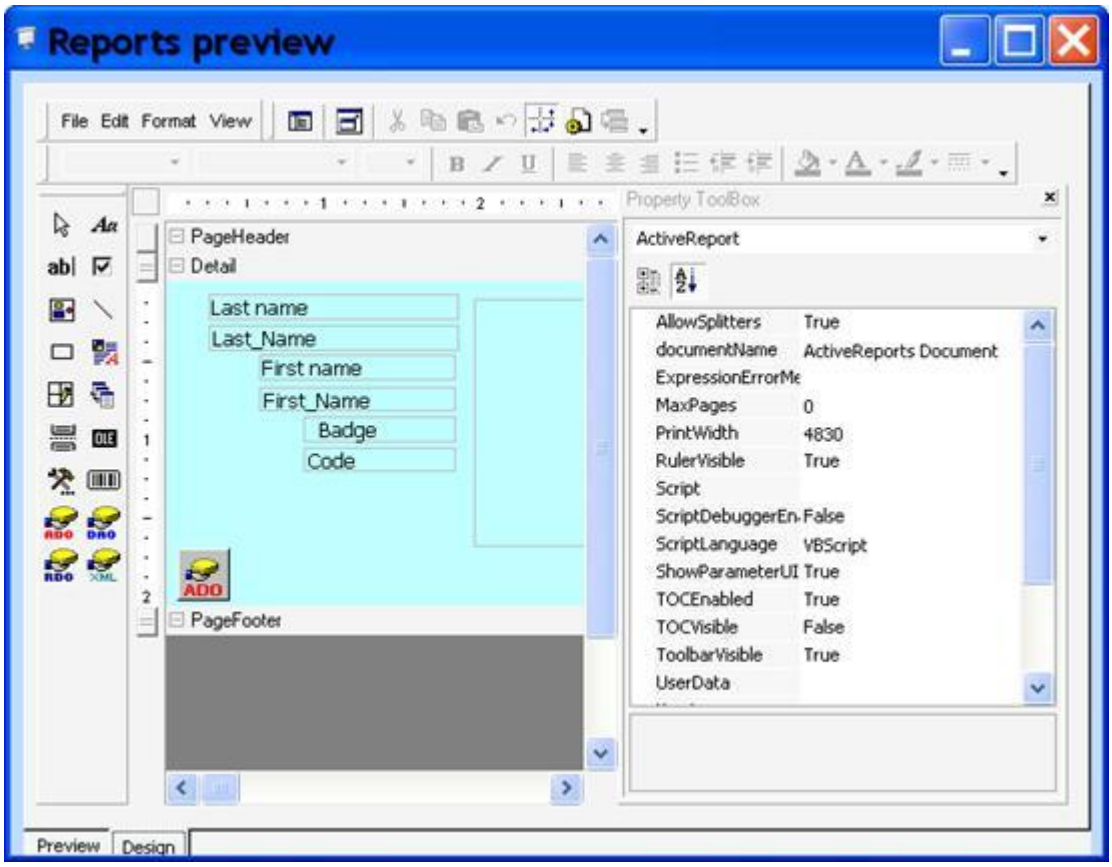
5.6.1 BADGE PRINTING PREVIEW SCREEN

Shows a preview of the edited layout. (Opens showing the default layout.)



5.6.2 BADGE PRINTING DESIGN SCREEN

Allows editing of the Badge Layout



Saving customized badge layouts for later re-use

In order to re-use badge designs, the layout must be saved in the application subdirectory \reports\bp and the file extension .rpx must be explicitly used (will not be shown on the dropdown menu unless this is done.)

Saved layouts appear in a combo box in the All cardholders/General screen, to the left of the badge printing button (the previous layout is automatically saved as « layout1 »).

Operating Mode

The design tab is based on a professional tool 'Active Report'®. This manual does not cover the large variety of options, but the following basic instruction and tips may be useful:

- Moving selected fields: Select an existing field from the 'Detail' window and drag and drop to the required position of the layout.
- Add a new field: Select the field type from the toolbar on the left and drop it in the layout.
- Add a field from the cardholder database: Click the View - Explorer menu. Two windows will appear on the left. On the lower one, click the "refresh" icon. All the fields of the cardholder screen will appear. Drag any field and drop it in the layout area.
- Change the background: Select the current background. On the **Property ToolBox**, go to the **Picture** field, click on the […] button and browse your PC for any graphic file.

- Change the text in a label/text box: Select the field and edit the text on the **Property ToolBox** window, in **Caption** (for a label) or **Text** (for a text box). Don't change **Name**.
- Save changes to the current layout: Click on the **Preview** tab.

Caution

Do not delete the default photo (cardholder image) field from any layout.
Do not delete the icon ADO from any layout.
Do not move, close or resize the **Property ToolBox** window.
If by mistake you have done any of the above actions, you may need to go back to the default layout. Exit the **All cardholders** screen, go to the application folder and delete the "_bp.rpx" file.

5.7 GRAPHICS + MODULE

The Graphic+ Module Release 3 supports a dynamic display of components in the system with each component represented by variable icons, so that, for example, a door symbol shows if the door is physically open or closed, the state of the relays controlling it ('always open' or 'always closed'), if it is in a 'forced' status, and whether alarms associated with it have been acknowledged and/or confirmed. The module also allows creation of network diagrams showing the real-time status of the controllers.

Maps with their associated symbols can be viewed with a zoom-in function (mouse click and drag), and a search function enabling user searches by symbol. Symbol can be deal located and map options cleared.

Users can define 'double-click' option on any symbol, for moving to another map, viewing a camera stream, or triggering an action or a process. Maps displays can be zoomed to show more or less detail, and specific symbols can be defined to be 'always visible', or to be hidden at some zoom levels.

The ***Active alarm*** screen provides a dynamic display of user-defined maps, with active symbols representing the system components. Each symbol is dynamically displayed, with user-defined variations to show its current state, including 'blinking' to attract attention. This assists the user in monitoring and supervising alarms and events in real time.

There are two screens that allow the user to build the required set of symbols and to place them on maps for dsplay.

Symbol builder **screen** - for displaying, creating or importing graphical symbols. It also enables previewing the relevant animations for the different door & alarm status such as door open / door closed / door forced / door remained open too long.

Position screen - for placing the symbols on the maps, linking the symbol to the corresponding component, and defining the operation to be done when double-clicking the symbol.

Editing and manipulating the graphics is done using the Visio® Stencil library.
Actions include imports, zoom level feature, input group symbols.

This module supports multi-site installations.

This module uses the Media\Bin directory in order to customize toolbar icons.

Note: The Graphic+ module requires the following:

G+ module authorized on the main application dongle.
(Also available in DEMO mode for testing)

.Net framework should be installed on the PC (requires 22MB free space)
http://www.microsoft.com/downloads/details.aspx?familyid=0856eacb-4362-4b0d-8edd-aab15c5e04f5&displaylang=en

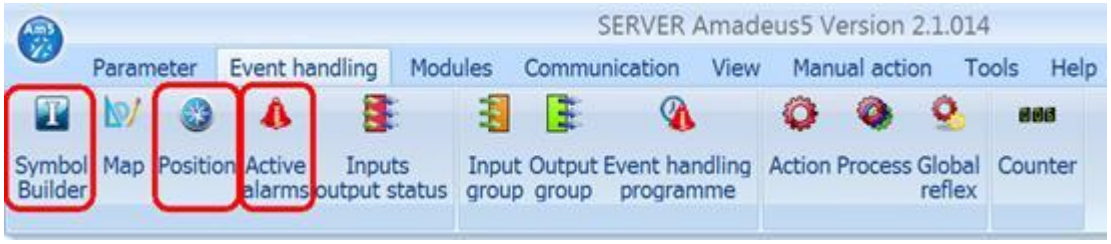
Download the G+ module from
www.dds-security.com/download/am5/graphic_plus_setup.exe
and install in the application folder

.ini File Setting for Graphic+ Module

```
Graphic+ = 1
```

5.7.1 USING THE GRAPHICS + MODULE

The Graphic+ module changes the Event Handling Menu, introducing 2 configuration screens (Symbol Builder, Position) and replacing the standard Active Alarms with an updated, interactive screen.



Symbols are prepared with the *Symbol Builder* screen. Symbols belong to families that are grouped into Symbol Libraries, where the members of each library can use the same types of connections and possible animation states.

Once defined, symbols are placed on user-defined maps using the *Position* screen, and in that screen each symbol is associated with the components that it represents.

The user then uses the *Active Alarms* screen (G + version) to monitor, supervise and manage the site.

5.7.2 SYMBOL BUILDER SCREEN

This screen allows the user to view the libraries containing the built-in symbols (and their animations), and to create new symbols and edit existing ones.

By default, the **Libraries** item is selected in the View dropdown, and the available **Symbol Libraries** are show as Tabs.

View

After selecting a Library Tab, choose a symbol to view and right-click to select the Preview Animation option.
The symbol is shown in an editing window.
2 View options are available:

- **Property Editor**
- **Rulers**

Library

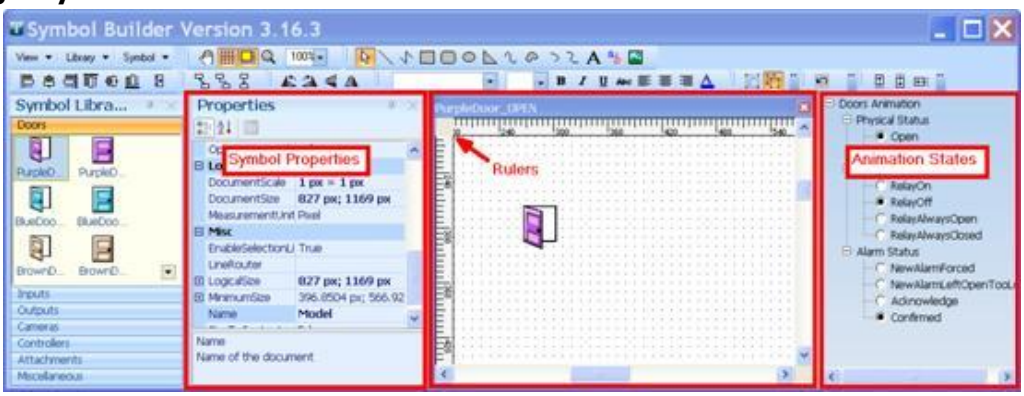
Dropdown: **New, Import, Close**

- **New** – define a new Symbol Library
- **Open** – Open an existing Symbol Library (normally in the Applications's Pallette Directory) and add it to the list of available Symbol Library Tabs
- **Close** - Close the selected Symbol Library Tab and remove it from the list

Symbol

Dropdown: **New, Edit, Rename, Save, Remove, Preview Animation**

Editing a Symbol



The Symbol Builder allows the user to view and edit the symbol's properties, view the selected symbol on an editing field, and to view each of the symbol's animation states (for symbols which include animated states). Editing is based on the Visio graphics package.

Properties

The user can set or change characteristics such as size, colour, line style, shadows, etc..

Predefined Animation States

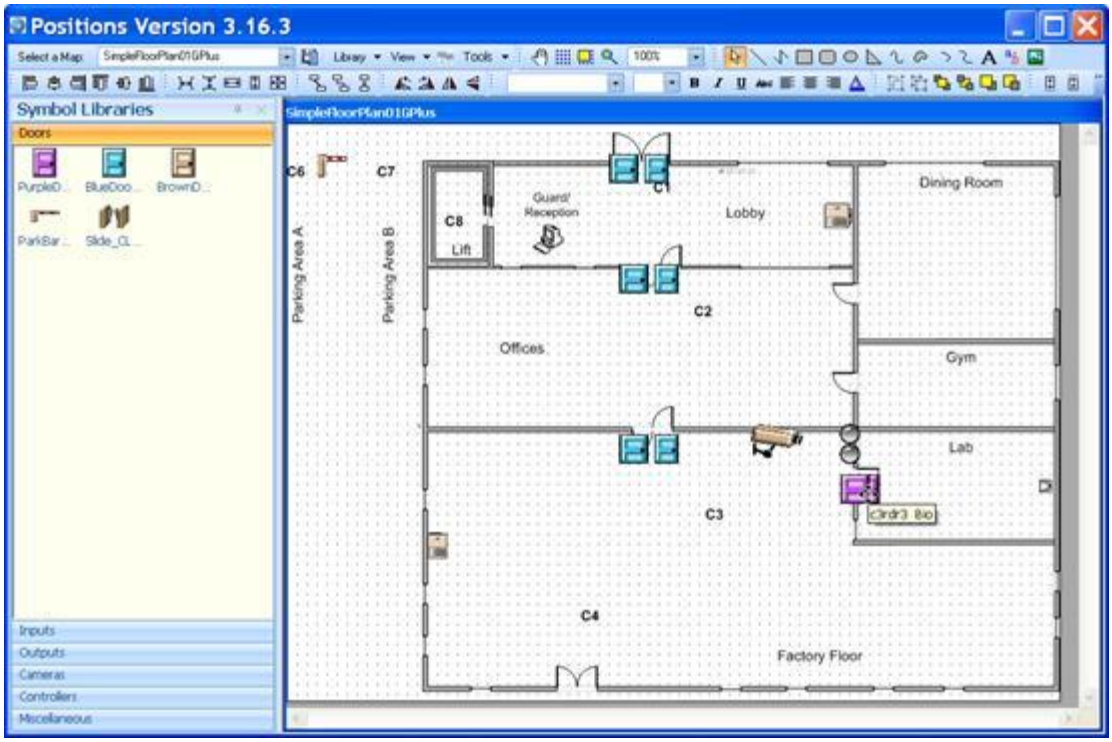
Each library may have its own defined animation characteristics, allowing symbols in that library to be displayed differently depending on their state.
States requiring attention include dynamic display effects such as blinking (*).

Physical Status	Relay Status	Alarm Status
Door		
Open	Relay On	NewAlarmForced*
Close	Relay Off	NewAlarmLeftOpen*
	Relay Always Open	Acknowledged
	Relay Always Closed	Confirmed
Inputs		
Open		NewAlarmImmediate*
Close		NewAlarmDelayed*
		Acknowledged
		Confirmed
Outputs		
Open		
Close		

The Cameras, Controllers, Attachments and Miscellaneous libraries do not have predefined Animation characteristics.

5.7.3 POSITION SCREEN (G+)

Allows the user to place symbols on maps, and associate the relevant site components (doors, inputs, relays, cameras) to each symbol.



Hovering the mouse over any symbol that has been assigned to its component will show a tooltip with the component name (as 'c3rdr3 Bio' in the example above).

Position, Edit and Assign a Symbol

Symbols are positioned on the Map by dragging them into position.
The icons can be resized. Right-clicking on a symbol opens a quick-edit menu.

Open Symbol Property

Align

Flip

Grouping

Order

Rotate

Resize

Layout Modes

Fill Color

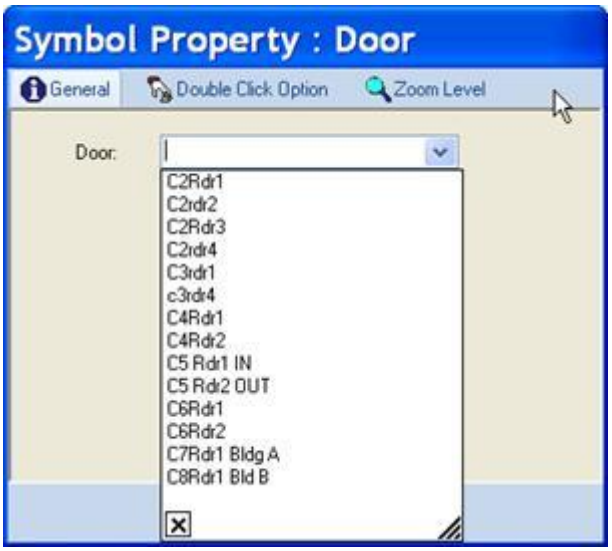
Line Color

Dash style

Line Width

Assigning the Symbol to a component

Once the symbol is in place, double-click on it to open the list of components. Use the **General** tab to select a component which the symbol must be assigned.

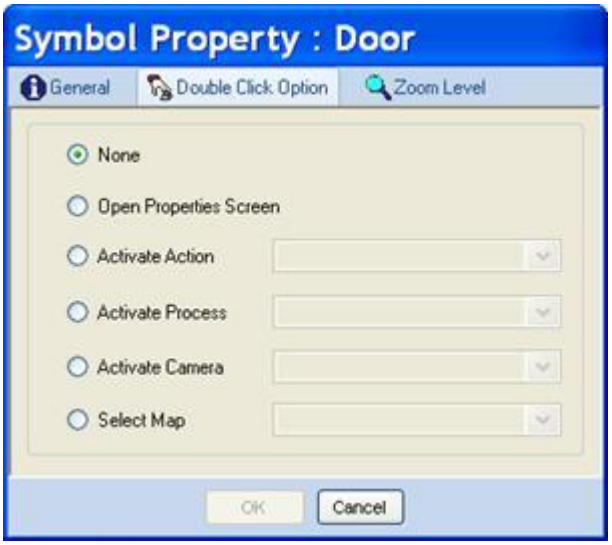


Assigning Miscellaneous Symbols

Items in the Miscellaneous Library can be assigned to Free Symbols, Maps or Input Groups. Such assignments are used as follows:

- **Free Symbols** – the symbol shows on the map, and behaves as set in its 'Double-Click option' (for activating actions, processes, etc.)
- **Maps** – the associated map is opened by double-clicking.
- **Input Groups** – the symbol is associated with an Input Group, and will display an alarm condition if any member of the Input Group is in an Alarm state.

Use the **Double-Click Option** tab to define Symbol behaviour for the user



Use the **Zoom Level** tab to define when this symbols is to be displayed

Display Always

The symbol will be displayed no matter what level of Zoom is used in the Active Alarms display

From Level – To Level

The symbol will only be displayed when the Zoom level of the map in the Active Alarms window is within the selected range

5.7.4 ACTIVE ALARMS SCREEN (G+)

The new Active Alarms screen is the 'heart' of the module. This screen allows monitoring of physical and alarm status of each component of the site in real time. It also enables user intervention directly from the screen for operations such as: running user- defined actions/processes, arming /disarming alarm inputs, opening/closing doors, activating any relay, viewing a live video stream from any one of the installed CCTV cameras.

Note: A Summary of the items shown in the example is given after the list of fields below

Active Alarms screen (Graphics +) Fields

Select a Map

Select from the list of maps

View options

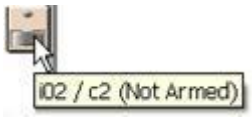
Dropdown list allows user to select Layers, Alarm Table, and/or Pan and Zoom window

Confirm All button

Allows user to confirm all outstanding alarms
(no option to add notes if this button is used)

Select Button

Allows a Symbol to be selected (Tooltip indicates Name and Arming Status)



Pan button

Select the Pan symbol, allowing user to move the map display

Magnify button

Select an area to magnify

Current Zoom level

Shows current zoom level

Mode button

Toggle between 'Auto-select last alarm' and 'Remain on selected alarm'

Active Alarm counters

Shows number of active alarms

Acknowledged Alarm counters

Shows number of acknowledged alarms

Last Refresh at:

Automatically updated

Alarm List

List of Active alarms

Instruction window

Shows latest instruction that was associated with an alarm.
Note: will not be updated if display mode is set to 'Remain on selected alarm'

Display Selections

Allows user to display or hide Doors, Inputs, Outputs and Cameras

Search Window

Allows user to show all or only the selected items

Zoom Window

Shows what part of the full map is currently displayed (useful when user has changed Zoom level and/or used the Pan button)

Map Window

Active Map display

Summary of items shown in the example:

- **Symbols**:
  Input Group symbol – single symbol includes several inputs – will change if any of its components are in alarm state

Active Door alarm - Symbol changes to show door 'open' if it remains open, but red rectangle blinks even if closed again, until alarm is acknowledged

- **Acknowledged Door alarm** – door shows as closed, green rectangle shows alarm acknowledged
- **Active Sensor Alarm** – blinking red rectangle shows alarm was activated
- **Camera activated** – double-click on camera symbol activates camera, shows image.
  Pan/Tilt/Zoom controls in camera window
- **Selecting and Activating a Process** – Double-clicking on a Process will trigger its activation

- **Action List** – Right-clicking on a symbol opens an Action List
  (Actions in the list depend on properties of the item represented)

```
Acknowledge
Confirm
Input deactivation
Return to normal mode
Activate relay During 4 Seconds
Activate relay continuously (Constant ON)
Deactivate relay continuously (Constant OFF)
Return to normal mode
Open Reader properties
```

5.8 OPC SERVER MODULE

OPC defines an open industry-standard interface for the data exchange between devices, PLC's and Windows applications. It is based on OLE and ActiveX technology that provides interoperability between different field devices, automation/control and business systems.

The Application access control solution can be integrated into any SCADA-supervision application by using the **OPC Server software module**, which supports both proprietary and OPC protocols. Tags allow on-line bi-directional communication between the installation inputs, relays, doors, and all communication transactions, on one hand, and the SCADA relays, processes activation and screens opening, on the other.

For detailed information, the document describing the Application an OPC Server is included in the Installation CD.

Consult your reseller to integrate access control into your SCADA application.

5.8.1 APPLICATION – OPC CLIENT INTERFACE

APPLICATION -> OPC CLIENT

Communication status of controller: Com OK or Com Error

Logical status of all inputs: Open/Close depending on NO/NC, manually deactivated or normal status, etc.

Physical status of all relays: Open/Close, open by global reflex, etc.

All Application events, such as:

- Access: granted, denied, granted with duress code, denied too much trials
- Alarm: start of immediate alarm or delayed alarm, end of alarm
- Technical alarms, such as: power off, table error, etc.
- Unknown badge

OPC CLIENT -> APPLICATION COMMANDS

Relay control:

- Activate continuously - Constant ON
- Deactivate continuously - Constant OFF
- Activate during x sec
- Return to normal mode

Inputs:

- Input deactivation
- Return to normal mode

Execute Application actions

- Execute Application processes
- Open Application screens

5.8.2 OPC MODULE OPERATING MODE

1. Check that the OPC module has been purchased
   (the letter “O” should appear in the dongle definition)
2. Select OPC Server Activation in the Tools/Options/Server screen
3. Restart the application

5.9 MODBUS MODULE

The Application supports integration of Modbus IP. This support enables external SCADA (Supervisory Control and Data Acquisition) applications to communicate with the Application using Modbus IP in order to receive real time data such as input/outputs status as well as sending commands to activate relays, predefined actions/processes and even opening Application screens.

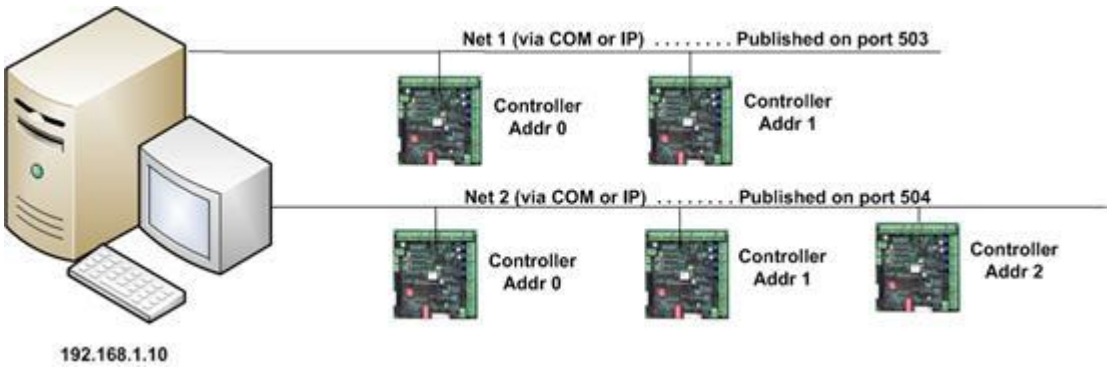
5.9.1 MODBUS PROTOCOL

MODBUS® Protocol is a messaging structure developed by Modicon in 1979, used to establish master-slave/client-server communication between intelligent devices. Modbus IP combines the Modbus protocol with the TCP/IP thus enabling implementing any device that supports TCP/IP sockets.

5.9.2 MODBUS INTEGRATION STRUCTURE

The data for each Application controller network (i.e., bus of controllers) is distributed on a different TCP port starting with port 503. For each of the controllers on the bus, the Application builds a virtual Modbus device. Each controller has its own device ID equal to the controller address + 1.

i.e. A Controller with address 0 on the system will receive device ID no.1 on the Modbus IP integration and so on.


Net 1 (via COM or IP) . . . . . Published on port 503
Controller Addr 0
Controller Addr 1
Net 2 (via COM or IP) . . . . . Published on port 504
Controller Addr 0
Controller Addr 1
Controller Addr 2
192.168.1.10

Application		Representation in Modbus IP		
Controller Net ID	Controller address	IP	Port	Device ID
1	0	192.168.1.10	503	1
1	1	192.168.1.10	503	2
Controller Net ID	Controller address	IP	Port	Device ID
2	0	192.168.1.10	504	1
2	1	192.168.1.10	504	2
2	2	192.168.1.10	504	3

For Interface details, see *Recommended Technical Documents*

6 COMMUNICATION TAB

The Communication Tab provides the user with tools to monitor communication in the networks, see the status of all controllers and their attached hardware, reset and re-initialize them, and view /clear the current event log.

There are 2 groups of Operator actions in the Communications Tab:

Diagnostics	Display options
Diagnostic	*View Log*
	Clear Log

6.1 DIAGNOSTIC

The Diagnostic screen gives the user access to various Diagnostic tools.

If there is only one network the Diagnostic screen opens the names of active controllers in bold, and inactive readers greyed-out.

If there is more than one network, the Diagnostic screen opens with all Networks collapsed. Click on the + to expand one or more networks, then select the Networks and Controllers that should be displayed by checking the relevant tree boxes.

The following screens and menus are available:

Diagnostic Screen – General Information (Controllers)

Diagnostic Screen – General Information (Biometric readers)

Diagnostic Screen – Download Menu

Diagnostic Screen – Communication Menu

Diagnostic Screen – Hardware Menu

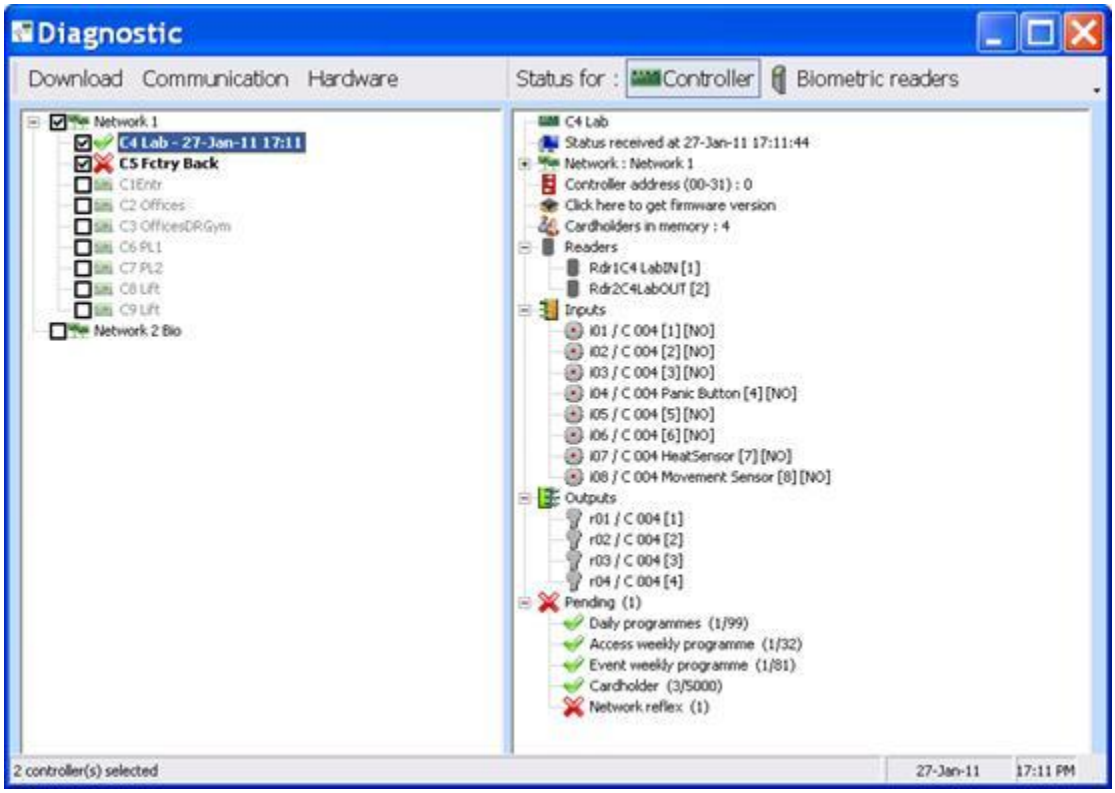
Some advanced commands are also available – these should only be used by trained personnel.

Diagnose Screen - Action Menu - Accessed by double-clicking the centre bar between the two windows.
Communications Polling Diagnostics – special .ini setting

6.1.1 DIAGNOSTICS – CONTROLLER INFORMATION

When a Controller is selected by clicking on the name, Controller details are displayed in the right-hand window

Note: If communications are not OK, then the details for the controller as stored in the system are shown.



- If communications is OK, then a green ✓ is shown, and the current Controller date and time are displayed.

The system compares the Controller time with Application server time. If there is less than 5 mins difference, no change is made. Otherwise, the system automatically updates the Controller time. This change is made immediately, but is not shown until the next time the user clicks on this Controller.

- If communication cannot be established, then a red × is displayed.

The following controller details are shown:

Controller name

Name of this controller

Time and date

PC Time when these details were received

Network information

Expanding the Network entry (by clicking on the + symbol) shows the following:

- COM port used
- COM speed (as set in *Tools/Options/Communication* screen)
- Timeout delay
- Time out polling

- Waiting delay

Controller Address

Physical address of the controller, as set in the HW DIP-switches

Firmware version button

Clicking this button gets the current firmware version information from the selected controller

The firmware version is given in dd/mm/yy format, followed by ROM information that may be used by hardware technicians.

Cardholders in memory

Shows the total number of cardholders for whom information is currently held in the selected controller

Readers

Expanding the Readers entry (by clicking on the + symbol) shows a list of the Readers associated with the selected controller.

Right-clicking on a reader gives the option of opening the associated Reader screen

`Open Reader screen`

Inputs

Expanding the Inputs entry (by clicking on the + symbol) shows the Inputs associated with the selected controller.

Right-clicking on an Input gives the option of opening the associated Input screen

`Open Input screen`

Outputs

As for Inputs

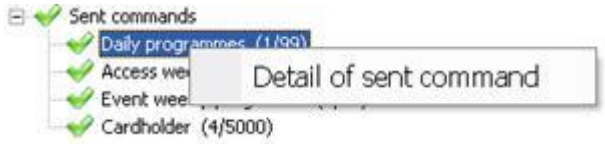
Pending

No. of commands not yet sent

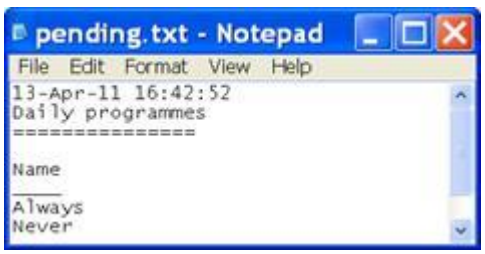
Sent commands

Statistics are given for the commands sent to the selected controller

Right-clicking on a line gives the option of opening a screen with details of the selected command



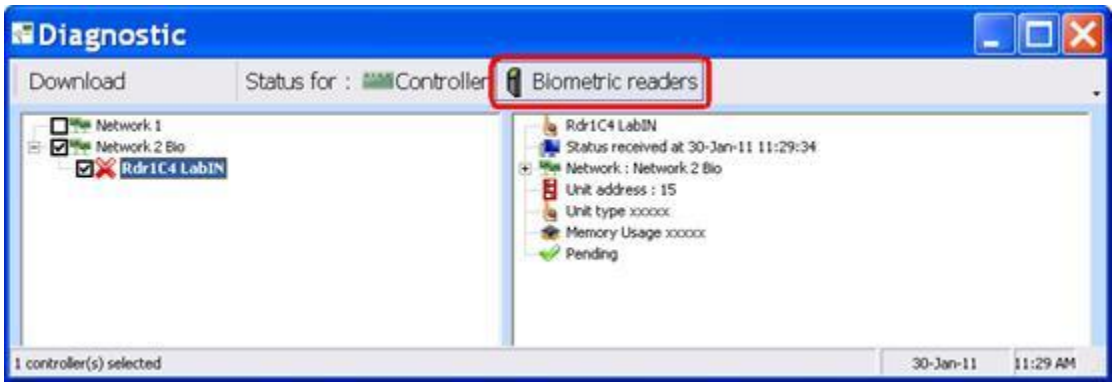
A Notepad window shows the content of the selected command.



6.1.2 DIAGNOSTICS - BIO READER INFORMATION

If the 'Biometric readers icon is selected, then the Diagnostic display allows the user to access information about Biometric readers in the system.

Selecting a Network used for communication between the Biometric readers and the PC gives access to any Biometric readers defined on that network



Reader Name

Name of the Bio reader

Status Received

PC Time when these details were received

Network

Expanding the Network entry (by clicking on the + symbol) shows the following:

- COM port used
- COM speed (as set in *Tools/Options/Communication* screen)
- Timeout delay
- Time out polling
- Waiting delay

Unit Address

Physical address of the reader

Unit Type

Proprietary information about the specific Bio reader

Memory Usage

Shows the total number of cardholders for whom information is currently held in the selected reader

Pending

No. of commands not yet sent

6.1.3 DIAGNOSTICS – DOWNLOAD MENU (CONTROLLERS)

When the Diagnostic screen 'Status for' **Controllers** option is selected, the following Download commands are available.

Note: One or more controllers must be selected before these commands are executed. Clicking on a command with no controller selected will have no effect.

Select all controllers

Selects all controllers

Reset controller

Resets selected controller/s

Send time and date

Updates selected controller/s with current PC Time and Date

Send daily and weekly programs

Updates selected controller/s with relevant Daily and Weekly Programmes

Send all cardholders (Complete)

Updates selected controller/s with relevant Cardholder information

Send pending

Send all outstanding commands for selected controller/s

Detail Pending for selected controllers

Opens Notepad window with list of Pending commands

Send readers definition

Updates selected controller/s with relevant Reader definitions

Send controllers definition

Updates selected controller/s with relevant Controller definitions

Initialize except cardholders definitions

Initializes selected controller/s without changing Cardholder information

Initialisation (complete)

Full initialization of selected controller/s

6.1.4 DIAGNOSTICS – DOWNLOAD MENU (BIOMETRIC READERS)

When the Diagnostic screen 'Status for' **Biometric Readers** option is selected, the following Download commands are available.

Note: One or more readers must be selected before these commands are executed. Clicking on a command with no reader selected will have no effect.

Send all cardholders (complete)

Updates selected Bio Reader/s with relevant Cardholder information

Send pending

Send all outstanding commands for selected Bio Reader/s

Initialization

Full initialization of selected Bio Reader/s

6.1.5 DIAGNOSTICS – COMMUNICATION MENU

The following commands are available.

Note: One or more controllers must be selected before these commands are executed. Clicking on a command with no controller selected will have no effect.

Check communications (all)

One-time check of communications to all controllers

Check communications (selected)

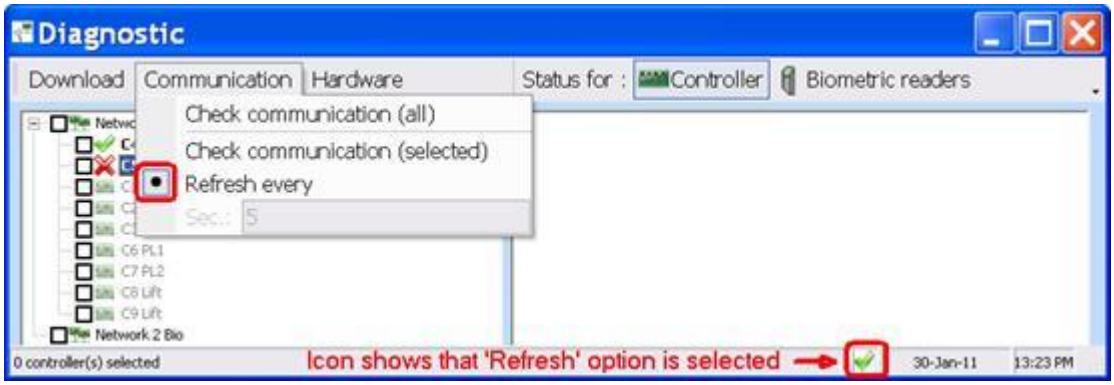
One-time check of communications to selected controller/s

Refresh every

Clicking on this option will set up an automatic Refresh cycle of all controllers selected in the left-hand window. A Refresh icon will appear at the bottom of the screen (see below)

Sec:

Defines how often the refresh cycle will be executed
(default 5 Secs)



6.1.6 DIAGNOSTICS – HARDWARE MENU

The following commands are available.

Note: One or more controllers must be selected before these commands are executed. Clicking on a command with no controller selected will have no effect.

Refresh F5

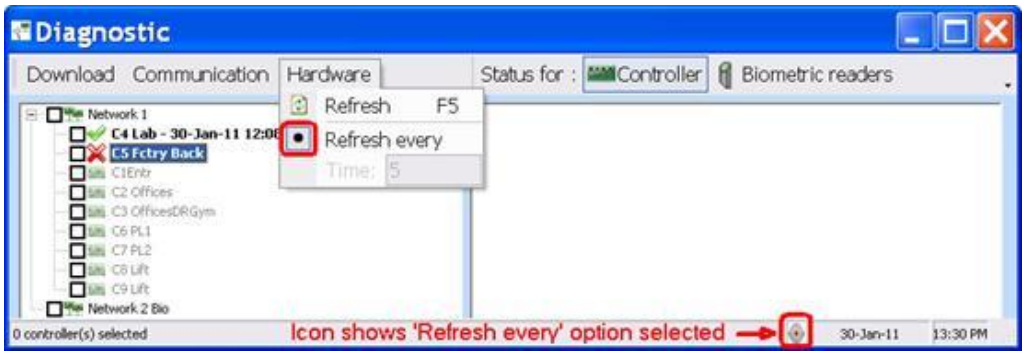
One-time refresh

Refresh every

Clicking on this option will set up an automatic Refresh cycle of all items selected in the right-hand window. A Refresh icon will appear at the bottom of the screen (see below)

Time:

Defines how often the refresh cycle will be executed
(default 5)



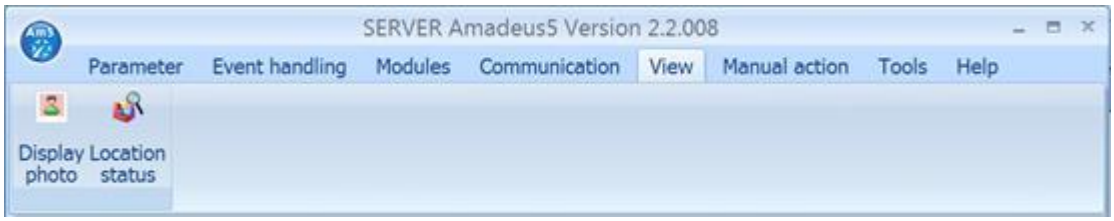
6.2 VIEW LOG

Clicking the View Log icon is a toggle which shows or hides the Log display window/s

6.3 CLEAR LOG

Clicking the Clear Log icon erases all entries in the Log display window/s

7 VIEW TAB



The View tab contains 2 Operator actions:

Display Photo
Location Status

7.1 DISPLAY PHOTO

The Display Photo screen allows a user to view the pictures and the details of any cardholder/s as they pass their badge/s at specified reader/s.

The user can select whether the display is triggered by one or more readers.

See also *Display Photo – Additional Facilities*

Always on top

Clicking this button allows this screen to be viewed even if other windows are opened

Prev / Next

Shows the position of the currently-displayed record in the total number of records currently stored for viewing.

Clicking on **Prev** or **Next** moves makes the previous or next record current.

(max 100 records, then FIFO)

Clear All records

Clears all currently-stored records from the viewing buffer

From Readers

Select <From All Readers> or select the specific readers from which records are to be displayed. Selection is toggled on or off by clicking on the reader line.

Note: More than one reader can be selected.

Record Display

Details of the cardholder, their photo (if one is stored) and the latest reader log transaction are displayed. Double-clicking on the Photo field opens the corresponding Cardholder record.

7.1.1 DISPLAY PHOTO – ADDITIONAL FACILITIES

OPENING MULTIPLE INSTANCES

If several readers or groups of readers need to be monitored separately, this can be assisted by opening multiple Display Photo windows. This is done by setting the ini variable

`MultipleViewPhoto = 1.`

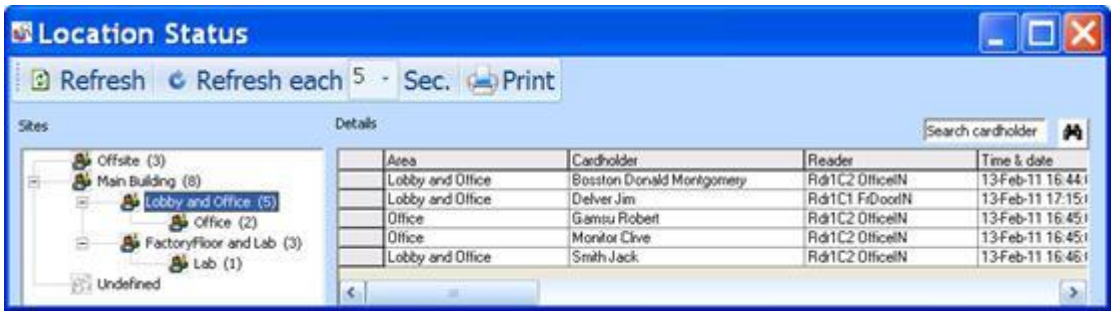
Each instance can then be set to display events at different readers or sets of readers. These can be opened on the main screen and/or on workstations, so that each operator sees the cardholder transactions from different locations.

CHANGING THE CARDHOLDER DETAILS IN THE DISPLAY

The user can control which cardholder details are displayed in the **Display Photo** screen – see *Customizing the Cardholder Information Displayed in the Display Photo Screen*

7.2 LOCATION STATUS

This screen allows the user to see the number of cardholders currently in each Area (as defined in the *Area* screen). A 'Search' function allows the user to quickly locate and highlight a particular record.



In order to use the Location Status screen, the following must be correctly defined;

- **Area** (*Area* screen) – a hierarchy showing how the different areas and sub-areas are arranged.
- Area Paths **From** and **To** (*Reader/Door Control* screen) – all readers that control entrance and exit to the above-defined Areas

Once the above are defined, Location is determined each time a badge is read and access granted at any reader that has the 'Area To' field defined.

Refresh

Clicking on this button causes the display to be refreshed

Refresh every

Clicking on this button causes the Location display to be updated every time the interval set in the Sec field passes.

Note: The **Refresh every** field is a toggle – Refreshing will only commence after the button is selected, and will stop if selected again.

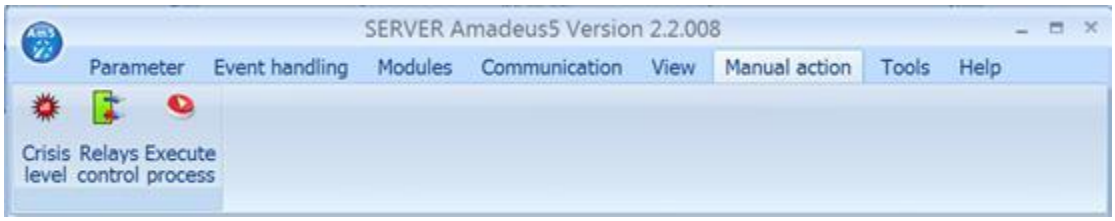
Sites

The total number of cardholders regarded as being in each area is shown in parentheses after the name of the area or sub-area.

Clicking on an Area or Sub-Area name will show all the Cardholders who are recorded as having entered the highlighted Area. If it includes a sub-area, all the cardholders in the sub-area will also be shown. The Area column allows the user to see where the specific cardholders are.

NOTE: Cardholder's location is normally not affected by the 'Area From' field. However, if a cardholder's request for access is denied, then, if their current 'From' Area does not correspond to the reader at which they were denied access, their 'From' area will be reset to the From area of the reader where they were denied access.

8 MANUAL ACTION TAB



The View tab contains 3 Operator actions:

Crisis Level
Relays Control
Execute Process

8.1 CRISIS LEVEL

The 'Crisis Level' tests whether access transactions for cardholders may proceed or should be rejected based on a system wide parameter that is set by this screen.

Each time any cardholder passes a badge at any reader, the system compares the general 'crisis level' to that cardholder's crisis level (as set for that specific reader in the Access Group associated with that cardholder).

The general Crisis Level is changed using this screen.

General Crisis Level

The current Crisis Level for the whole site, set in the Crisis Level screen.
Default = 0
When this value is changed the new value is immediately sent to all controllers. This process takes a very short time. Any subsequent Access request at a reader then uses the new general Crisis Level value to compare against the Cardholder's Crisis Level.

Definitions of relevant to Crisis Level

General Crisis Level

The current Crisis Level for the whole site, set in the Crisis Level screen.
Default = 0

Cardholder's Crisis Level

The Cardholder Crisis level can be different for each reader (but must be the same for readers on a particular controller). The value is set through the Cardholder's *Access Group*

Personal Crisis Level

Set in the individual *Cardholder/General* screen
The value set for Personal crisis level is only used at Readers where the value set for Crisis Level in the Access Group screen is set to <**Use personal crisis level**>.

How it works:

If the **cardholder's crisis level** is **equal to or higher than** the **general crisis level**, **normal access checking is allowed**, and the cardholder's access can be approved.

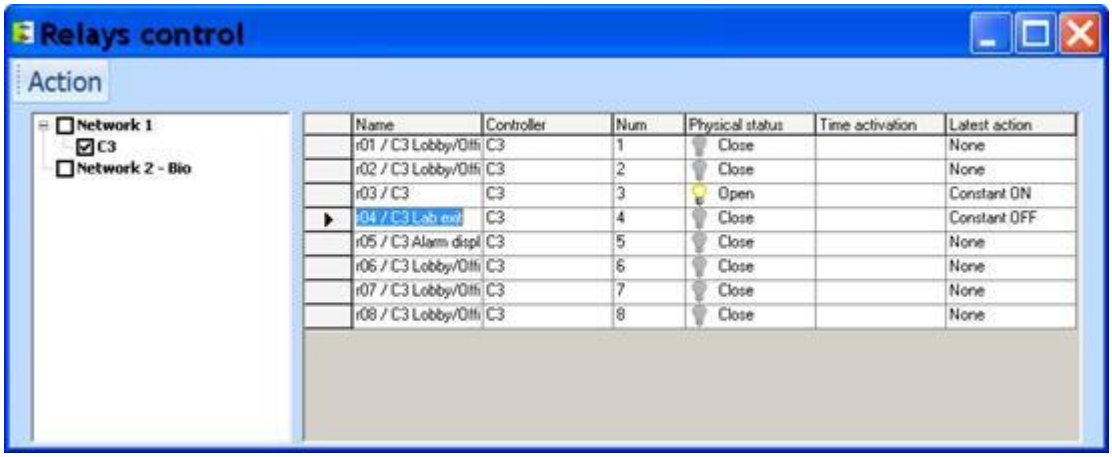
If the **cardholder's crisis level** is **lower than** the **general crisis level**, the **transaction is not allowed to proceed**, and the cardholder's access is denied.

The advantage of using this method is that, by changing the Crisis Level, one can impose a higher level of strictness (or possibly, a lower level of strictness) at ALL doors, WITHOUT sending individual authorization changes for all the cardholders. Such changes would have to be sent separately for all cardholders to all relevant controllers, and this could take considerable time.

See *Crisis Level – Concept and Example* in *Scenarios and Examples*.

8.2 RELAYS CONTROL

The Relays Control screen provides the user with a dynamic list of all the Relays on Controllers that are currently active. (Non-active controllers are **not** shown in this list).
The user can change the status of the relays from this screen.


Relays control
Action
Network 1
C3
Network 2 - Bio
Name
Controller
Num
Physical status
Time activation
Latest action
r01 / C3 Lobby/Offi C3 1 Close None
r02 / C3 Lobby/Offi C3 2 Close None
r03 / C3 C3 3 Open Constant ON
C3 4 Close Constant OFF
r05 / C3 Alarm displ C3 5 Close None
r06 / C3 Lobby/Offi C3 6 Close None
r07 / C3 Lobby/Offi C3 7 Close None
r08 / C3 Lobby/Offi C3 8 Close None

Navigation tree

The user can choose to display Relays belonging to any or all of the currently active Controllers by checking the appropriate boxes in the tree.

Relay table

The table can be sorted on any of the column headings. Clicking on the heading will toggle the display of all relays between ascending and descending order based on the selected heading.
The following headings are listed:

- **Name**
- **Controller, Number** – Name and number of the controller
- **Physical Status** – **Open** or **Closed**. If there are problems communicating with the controller a '**?**' will be displayed to show that the status is unknown
- **Time activation** – shows if a Weekly Program is associated with this relay:
  The relay is automatically activated/deactivated according to the green/red time zones of the Weekly Programme
  - V ON by weekly program: The relay is activated because a weekly program has been associated and the current time falls within the activation boundaries of the weekly program ('green' periods').
  - X OFF by weekly program: The relay is deactivated because a weekly

program has been attributed and the current time falls outside the activation boundaries of the weekly program ('red periods').

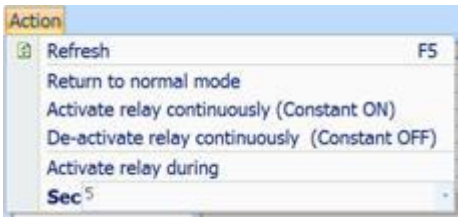
- No text: No weekly program has been attributed to the relay.

Latest Action - Shows if the normal setting has been altered (by an Action, Process, or Global Reflex).

Changing the Relay settings

A single relay can be selected by clicking on its row.

Clicking on the **Action** button opens the Action menu for the selected Relay



Action Menu

Refresh

Refresh the displayed information about the relays

Return to Normal mode

Cancel whatever manual actions have been executed and return the Relay to the state defined for it

Activate relay continuously (Constant ON)

Set the relay continuously activated (ON)

De-activate relay continuously (Constant OFF)

Set the relay continuously deactivated (OFF)

Activate relay during

Sec

Opens the relay for the defined time (up to 120 secs).

Note: Do not use the setting 122 secs.

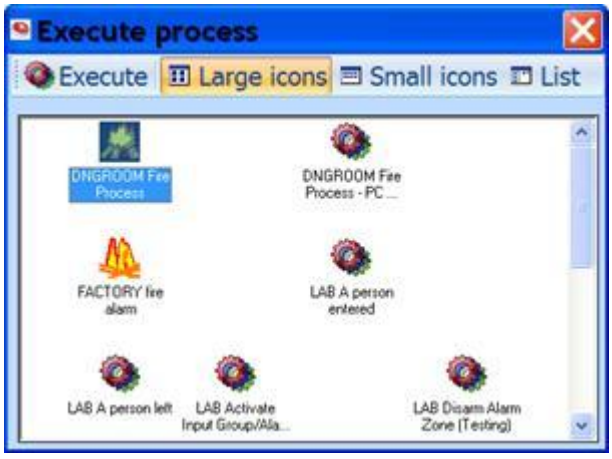
(this value is reserved for a Toggle function that is not relevant in this screen)

8.3 EXECUTE PROCESS

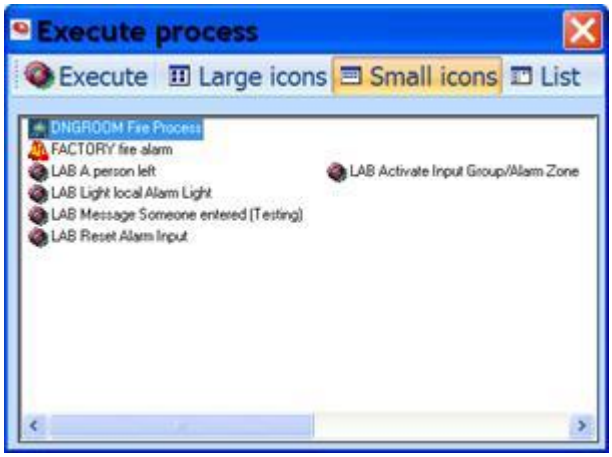
Shows a list of all Processes and allows the User to execute a selected Process manually.

The user can choose from one of 3 view options.

Execute Process - Large icons view (default)

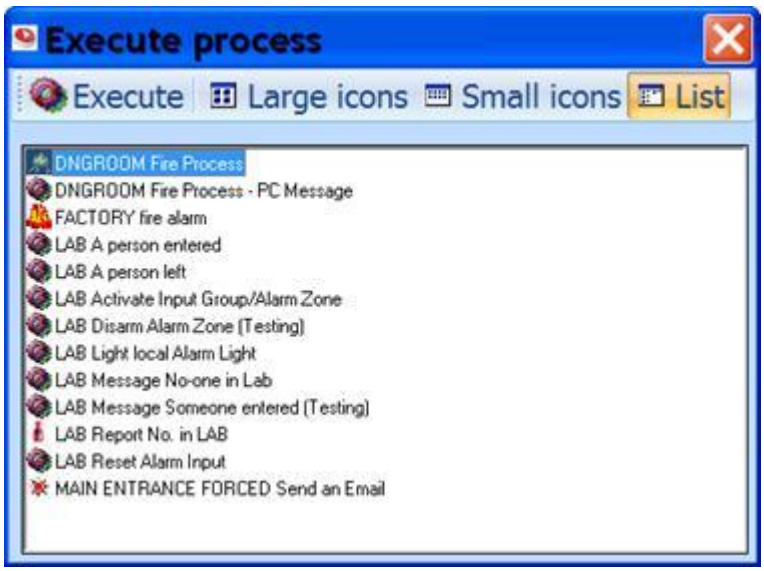


Execute Process - Small icons view



Execute Process – List view

(This view is recommended if there are a large number of Processes defined)



Any Process can be executed by selecting it and then clicking the **Execute** button or double-clicking the icon.

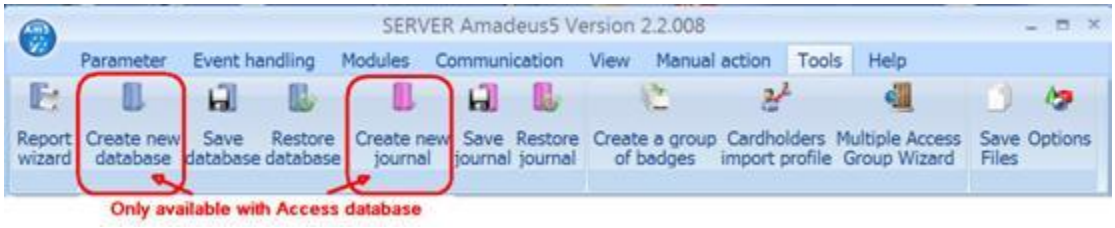
Note: In the Icon views, Processes are arranged alphabetically. The window size is fixed, and the user may need to scroll the display to see all the process icons.
Although the display can be edited by dragging the icons to new positions, the changed display is not saved, and the next time the screen is opened, the icons will be in their original positions.

Note: Icons for Processes can also be placed on the *Active Alarms* screen (using the *Position* screen) or on the Application Toolbar (using the checkbox 'add to Toolbar' in the *Process* screen

9 TOOLS TAB

There are two variations of the Tools Tab, depending on whether an Access or an SQL Database is in use.

TOOLS TAB USING ACCESS DATABASE



TOOLS TAB USING SQL DATABASE

There are 5 groups of Operator actions in the Tools Tab:

Reports	Database functions	Journals	Cardholder Groups	Operator Tools
Report wizard	*Create new database* (Access DB only)	*Create new Journal* (Access DB only)	*Create a group of badges*	*Save Files*
	Save database	*Save Journal*	*Cardholders import profile*	*Options*
	Restore database	*Restore Journal*	*Multiple Access Group Wizard*	
	Switch database (SQL DB only)			

9.1 REPORT WIZARD

The Application incorporates a powerful report wizard. A wide variety of standard reports (which are all customizable for layout and content) are included in the system. Reports are compiled from the journal or from any other information of the database (parameters, events or modules).

Reports are generated in the language of the application. They can be displayed, printed or exported. The Preview function means that, at the press of a button, the user can see a how the report will look, to verify any step in the process of building it.

Four user-friendly screens lead the user, step by step, through the process:

- Select the required report
- Select the data to be included
- Filter the data to show only the required records
- Organize the data (sorting and grouping)

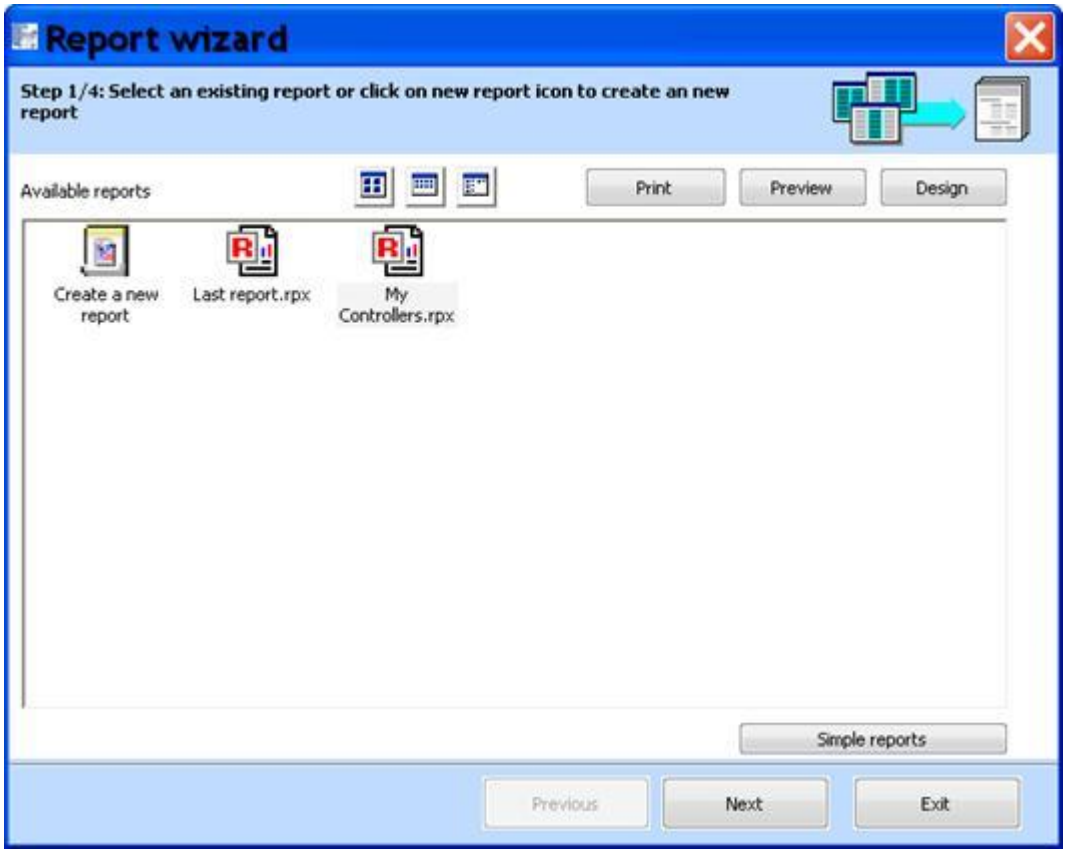
Note for Large Sites/Advanced Users

Processing Time: Users should take into account that, if all transactions are selected for a report, then processing a 'Preview' or a 'Print' instruction can take significant time in large installations. It is preferable to prepare reports using a limited group of records, and then change the relevant setting to 'All' after building the report and checking the output on a smaller sample.

Design Functions: Information in this documentation is intended for regular users only. Advanced functions require knowledge of the Active Report® professional tool.

9.1.1 REPORT WIZARD STEP 1/4 - REPORT SELECTION

The first screen of the report wizard allows the user to select an existing report or start defining a new one. It is accessible via the icon of the navigation bar or via the ''Tools'' menu.



Available Reports

The 'Available Reports' window shows an icon to 'Create a new report', and icons for any other User-defined reports previously saved as x.rpx files. Double-clicking on any of the icons opens the *Report Wizard 2/4 screen - Data Selection* screen for the selected report.

(The last report generated by using the Wizard is always shown in an icon called 'Last Report.rpx')

Command Buttons

Large icons, Small icons & List:

The three blue icons allow the user to choose how the list of existing .rpx reports is shown.

Print

Click to print the selected report

Preview

Select a report in the list and click Preview to view the report as it will be printed

Design

Click to re-design the appearance of a selected report (for experienced users only)

Simple reports

Click to quickly create a standard journal report or to display a journal query.
See *Report Wizard 1/4 - Simple Reports*

Next

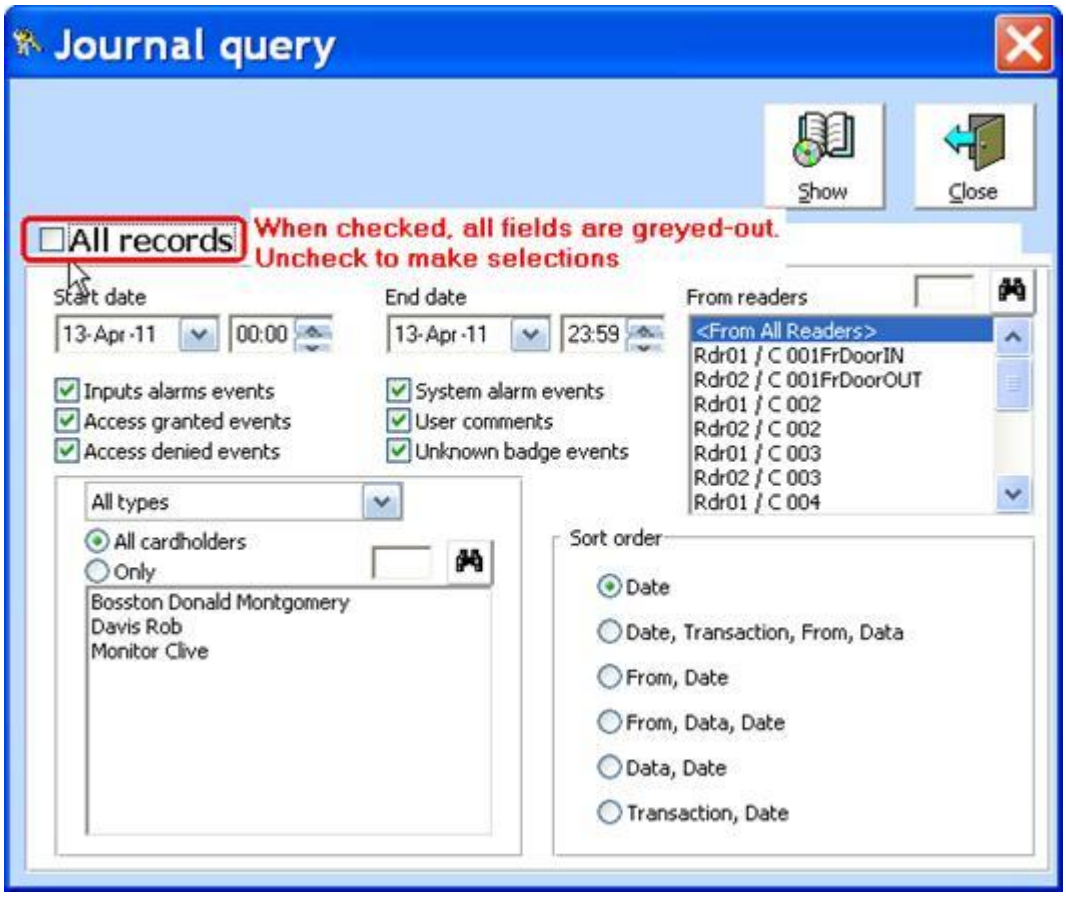
Click to go to the next step of the report wizard for the selected report
If no report is selected, the screen for a new report will automatically be opened.

Exit

Click to close the report wizard and go back to the main screen

9.1.1.1 REPORT WIZARD 1/4 - SIMPLE REPORTS

Selecting 'Simple Reports' in Report Wizard Screen 1 opens the Journal Query screen.



Fields

All records

The default setting has the 'All records' box selected. All options are greyed-out, and this setting produces a Journal Report for all transactions.

By unchecking the 'All records' box, the option fields are activated giving the view above, so that the user can choose parameters for the report.

Filtering and Sorting data:

Select the data filtering criteria from the journal

- **By date**: Select the date and time for the start
  (Date dropdown opens a calendar, time edited by selecting hours or minutes and using ▲▼arrows)
  Default setting is 00:00 to 23:59, current day
- **By reader/s**: Select <All readers> or click on the specific reader(s) required
- **By events**: Check the events to keep: Inputs alarms, Access granted, Access denied, System alarm, User comments, Unknown badge
- **By type** – use 'All types' or select Visitor, Employee or Guard
- **By Cardholder/s**: Select 'All cardholders' or check 'Only' and click on the required cardholder(s)
- **Sort order**: Select the desired sort order of the data

Show

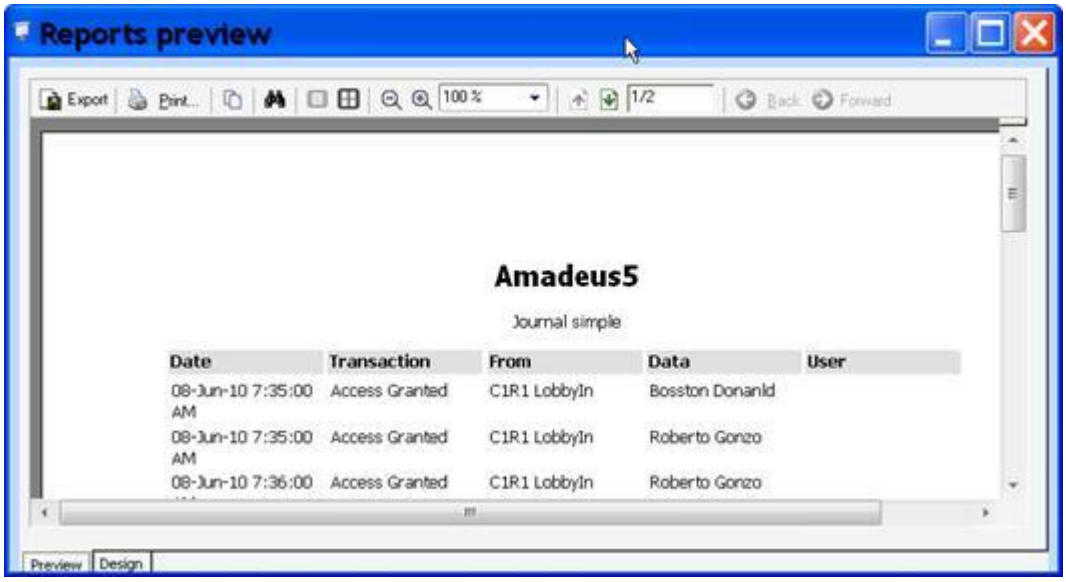
'Show' displays all the records as a table, and in that display, 'Preview' allows the report to be viewed, printed or exported. Layout can also be edited if required.

Close

Click to close the report wizard and go back to the main screen.
Users who do not have authorization to create a new report may still select a report and go directly to the *Data Filtering* screen to modify the report contents of existing reports.

9.1.1.2 REPORT WIZARD 1/4 - PREVIEW

This screen allows a screen preview of an existing report before printing and/or export.



Toolbar Buttons

Export

Opens the *Export* window.

Print

Click to print after having specified printing parameters.

Copy this page to the clipboard

Click to copy the current page only

Find

Click to search for a specific word in the selected report.

Single Page, Multiple Page, Zoom Out, Zoom In

Zoom

Click to adjust the report preview.

Previous Page, Next Page,

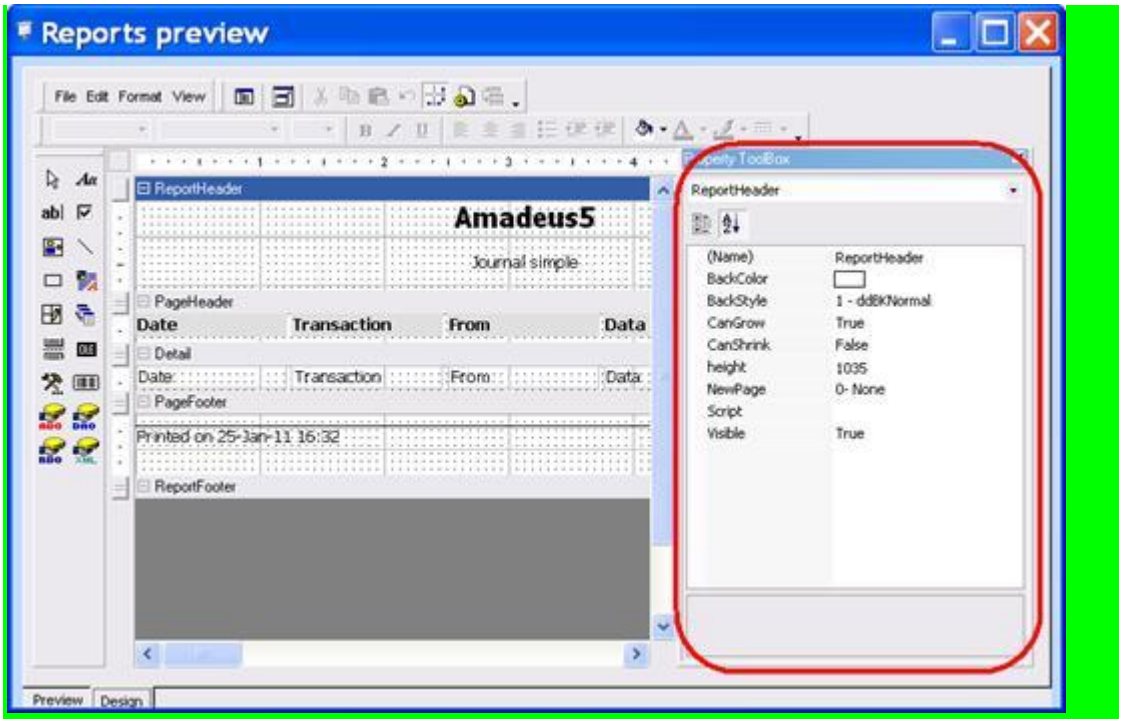
Page

Click to navigate in the report.

9.1.1.3 REPORT WIZARD 1/4 – DESIGN

This screen is reserved for experienced users only. It allows the redesign of existing report.

Clicking on the 'Preview' tab displays the preview of the report; this is useful for checking the modifications in real time.



Caution: DO NOT MOVE, CLOSE, or RESIZE the 'Property Tool Box' Window.

Operating Mode

The Design tab is based on the Active Report® professional tool. This documentation is not intended to cover the large variety of options - just some basic instruction and tips. Full information is given in the Active Report® documentation.

Moving selected fields

Select an existing field and drag and drop to the required position in the window.

Lengthen or shorten the space allocated to a field

Select an existing field and drag the blue squares around the field to resize it

Delete a field

Select an existing field and delete it

Change the text in a label/text box

Select the field and edit the text on the **Property ToolBox** window, in **Caption** (for a label) or **Text** (for a text box).

Do not change the 'Name' of any field

Change the font

Select an existing field and change the font on the **Property ToolBox** window, in the **Font** field

Add a new field or a picture

Select the field type from the toolbar on the left and drop it in the layout. If it is a picture field, go to the **Picture** field of the **Property ToolBox**, click on the […] button and browse your PC for any graphic file

Change the Report Header background

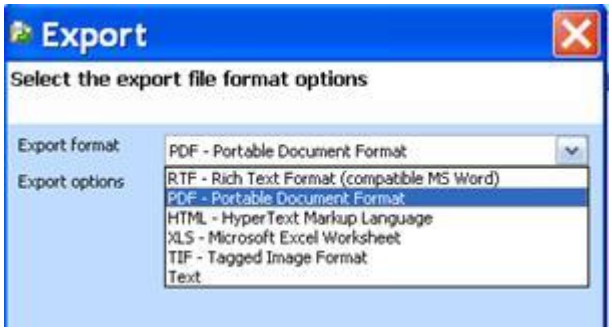
In the **Property ToolBox** window, select the Report Header window, and change the **BackColor** field, and set the **BackStyle** field to 1

Save all changes

Select the 'File/Save' menu and save the report on the 'Reports' folder under the application folder with RPX format

9.1.2 REPORT WIZARD STEP 2/4 – EXPORT

Selecting **Export** in the Preview screen opens the Export options window.


Export
Select the export file format options
Export format
PDF - Portable Document Format
Export options
RTF - Rich Text Format (compatible MS Word)
PDF - Portable Document Format
HTML - HyperText Markup Language
XLS - Microsoft Excel Worksheet
TIF - Tagged Image Format
Text

Export Format

Click to export the selected report in the following formats:

- RTF - Rich Text Format
- PDF - Portable Document Format (default)
- HTML - Hyper Text Markup Language
- XLS - Microsoft Excel
- TIF - Tagged Image Format
- TEXT

Filename

Type a filename.

Caution Remember to put in the correct file extension. Even though a file format is selected, the Active Report® tool does NOT provide a file extension – this is the user's responsibility.

If no path is entered, the file will be stored in the application folder.

Use the […] button to browse for another location

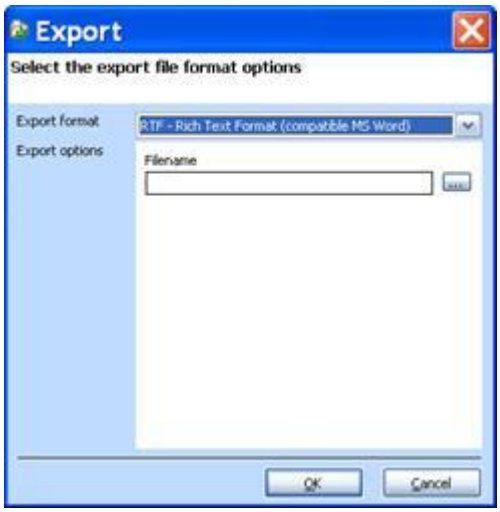
The default location will be reset each time this is used – i.e. the system will try to put the new file in the same location as the previous one.

EXPORT OPTIONS

Each Export format has its own set of options

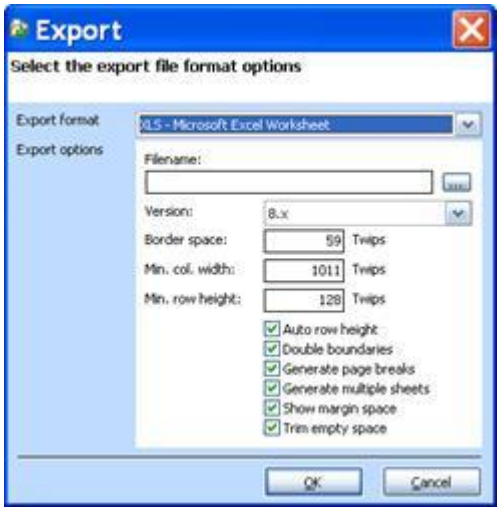
PDF Export Options

RTF Export Options

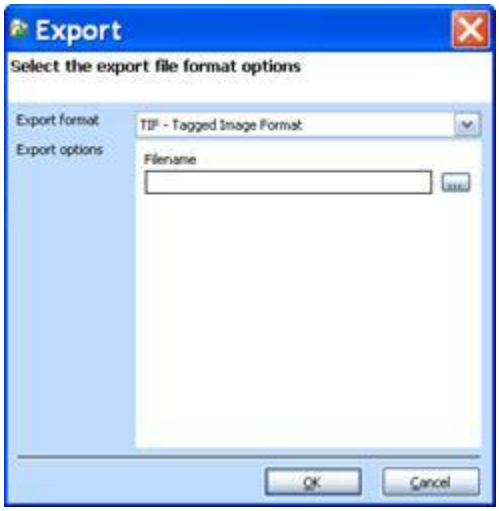


HTML Export Options

XLS Export Options



TIF Export Options

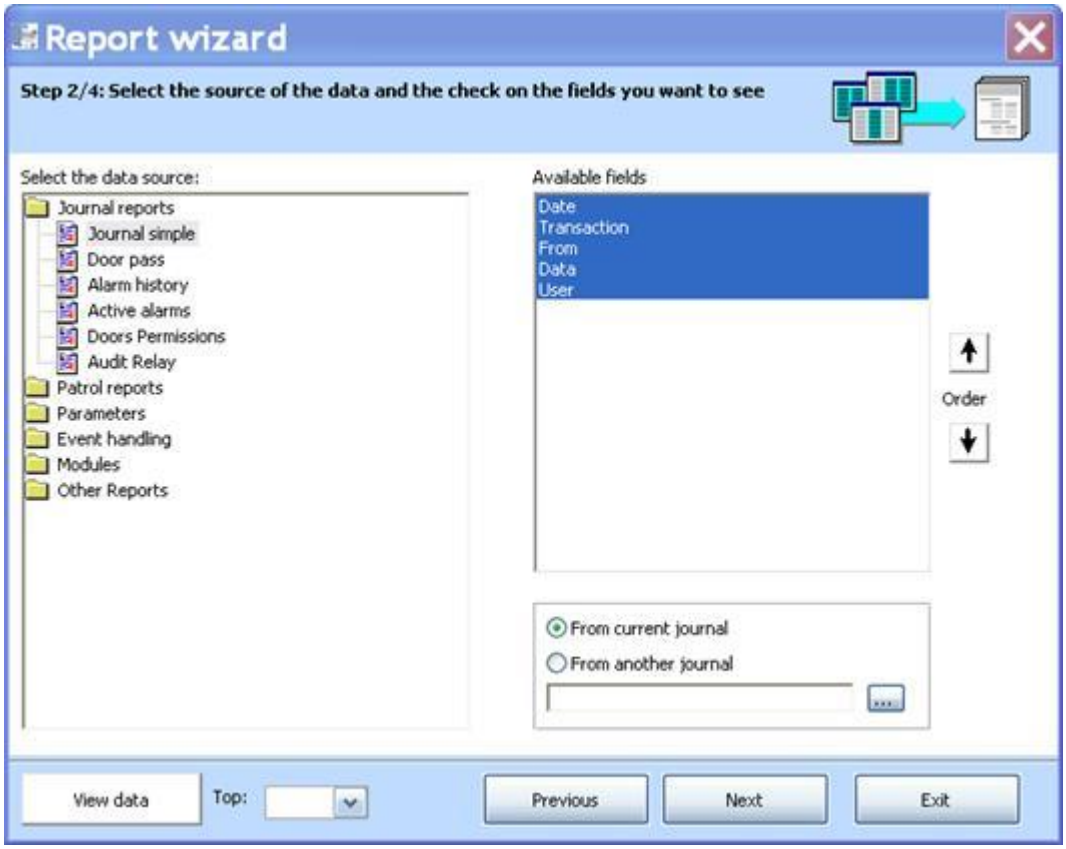


TEXT Export Options

9.1.3 REPORT WIZARD STEP 2/4 – DATA SELECTION

The second step of the Report Wizard allows the user to select the fields to display in the report.
For an existing report, the user can see the fields available for reporting, which fields are currently selected, and the display sequence. These parameters are easily modified.
If required, the user can also select a different source of data.

> **Note:** This screen may be accessed at any time from any screen, by clicking on the "Print" button ("F11" function key). Depending on the screen from which the wizard was launched, the data fields available from that screen will be listed.



Left Window

Data sources list grouped in folders by type. Select the required data source. See *List of available Standard Reports*

Right Window

Once the data source is selected in the left window, the corresponding list of available fields to display in the report is shown, with the default selected fields highlighted in blue.
Fields can be toggled on an off by clicking on them.
Fields that are not selected at this stage will not appear in the remaining steps.

Buttons ↑ & ↓

Click on these buttons to move a selected field in order to re-order the columns in the report as required

Select the Journal from which to create the report

The Application allows the choice of the journal (period) of the report:

- From current journal (by default)

- From another journal (with "Access" database ONLY)

Select any other journal of the system by using the [...] button, and specify its name and its directory

View data

Click on this button to preview the content of the data in table form;
Click again on the "View data" button to quit this mode

Top

Enter the number of records or select from the dropdown the number of records to be processed for the View action.
By default, this field is set to 1000, which means only 1000 records will be processed. However, the maximum of records that can be processed by the View action is limited to 50,000. The Print action is also limited to 50,000 records.
In large installations this reduces the processing time, and requires the user to view a limited number rather than processing the whole database.

Previous

Click on this button to return at the previous step of the report wizard

Next

The 'Next' button is greyed out until there is a list of fields in the 'Available Fields' window.
Click on this button to go to the next step of the report wizard

Exit

Click on this button to close the report wizard and go back to the main screen

Summary: Using the screen

To display the available data sources of a report type:

Double-click on the required report type from the left window

See Notes at the end of this section for more information

To display the available fields of a data source:

Click on the required data source from the left window;
The right window shows the list of available fields, some of them already selected (in blue)

To select the required fields:

Click on the available fields from the right window to change the default selection if required

To re-order the fields as required:

Use the arrows button to move the fields
The "View data" toggle button may be used to preview the data of the report. After Previewing, click 'View data' to return to this screen.

To continue the creation or the modification of a report:

Press the "Next" button to go to the next step of the report wizard

Notes:

1. The 'Journal Simple' report shows all transactions in the database (within the selected dates), including transactions of Deleted or Removed Cardholders.
2. The 'Door Permissions' report gives the Reader list showing, for each reader, who is allowed to access and when (i.e. by Weekly Programme). This report takes into account the Access Groups (standard and multiple), but it does NOT show Exception and ScheduleAG data.
3. Setting the ini file entry *ReportShowDeleted* = 1 adds the data type 'Deleted' to the choices for the **Door Pass** and **Door Permission** Reports. This allows the report to include

transactions from deleted cardholders. (Remember – this works only for 'Deleted' cardholders. Once cardholders are 'Removed', their data cannot be shown on Door Pass and Door Permission reports.
See *Create a Group of Cardholders/Delete*))

4. In the Door Pass report, the field 'Full name' is selected by default. This will use the cardholder name as held in the database when the report is created.
If the user selects the field 'Name in Journal' to be used in the report, it must be kept in mind that the name that will appear in this field in the report will be the original name that was written in the Journal when the transaction occurred. In most cases, there will be no difference – this is only a consideration where the cardholder name (Last and/or First) is changed.

9.1.3.1 REPORT WIZARD 2/4 – DATA VIEWING

This screen allows the content of the current report data at the different steps of the report wizard to be previewed.

From the Report Wizard screen 2, click **View data**.
(The example below is **Journal Simple**)

Report wizard
Step 2/4: Select the source of the data and the check on the fields you want to see
Date
Transaction
From
Data
User
13-Sep-10 09:34:00 Access Denied c3rdr2 Solomon Reginald
13-Sep-10 09:45:00 Access Denied C3rdr1 Solomon Reginald
13-Sep-10 09:51:00 Unknown Card C3rdr1 55023183
13-Sep-10 09:51:00 Access Granted c3rdr2 Roberto Gonzo
13-Sep-10 09:51:00 Satellite alarm C3 STLO 132
13-Sep-10 09:51:00 Access Granted C3rdr1 Roberto Gonzo
13-Sep-10 09:52:00 Access Granted C3rdr1 Bosston Donald Mor
13-Sep-10 09:52:00 Access Granted C3rdr1 Monitor Clive
13-Sep-10 09:52:00 Access Granted c3rdr2 Bosston Donald Mor
13-Sep-10 09:52:00 Satellite alarm C3 STLO 132
13-Sep-10 09:52:00 Start of Alarm i05 / C3
13-Sep-10 09:52:00 End of alarm i05 / C3
13-Sep-10 09:52:00 Start of Alarm i05 / C3
13-Sep-10 09:52:00 End of alarm i05 / C3
13-Sep-10 09:52:00 Access Granted c3rdr3 Bio Bosston Donald Mor
13-Sep-10 09:52:00 Access Granted c3rdr3 Bio Monitor Clive
13-Sep-10 09:53:00 Access Granted c3rdr2 Bosston Donald Mor
13-Sep-10 09:53:00 Satellite alarm C3 STLO 132
13-Sep-10 09:53:00 Access Granted c3rdr2 Monitor Clive
13-Sep-10 09:54:00 Access Granted C3rdr1 Bosston Donald Mor
13-Sep-10 09:54:00 Satellite alarm C3 STLO 132
Total records 100
View data
Top:
100
Previous
Next
Exit

Data displayed

Date, Transaction, etc.

Data fields that will be printed in the final report.

Navigating the View

The vertical slider on the right of the window can be used to scroll up and down through the available records.

Click on a record to select it (shown by the ►icon in corresponding Left-hand column)

Buttons ◄ & ► (below the window)

Click on these buttons to select earlier or later records

Buttons |◄ & ►|

Click on these buttons to select the first or the last record

Video Icon

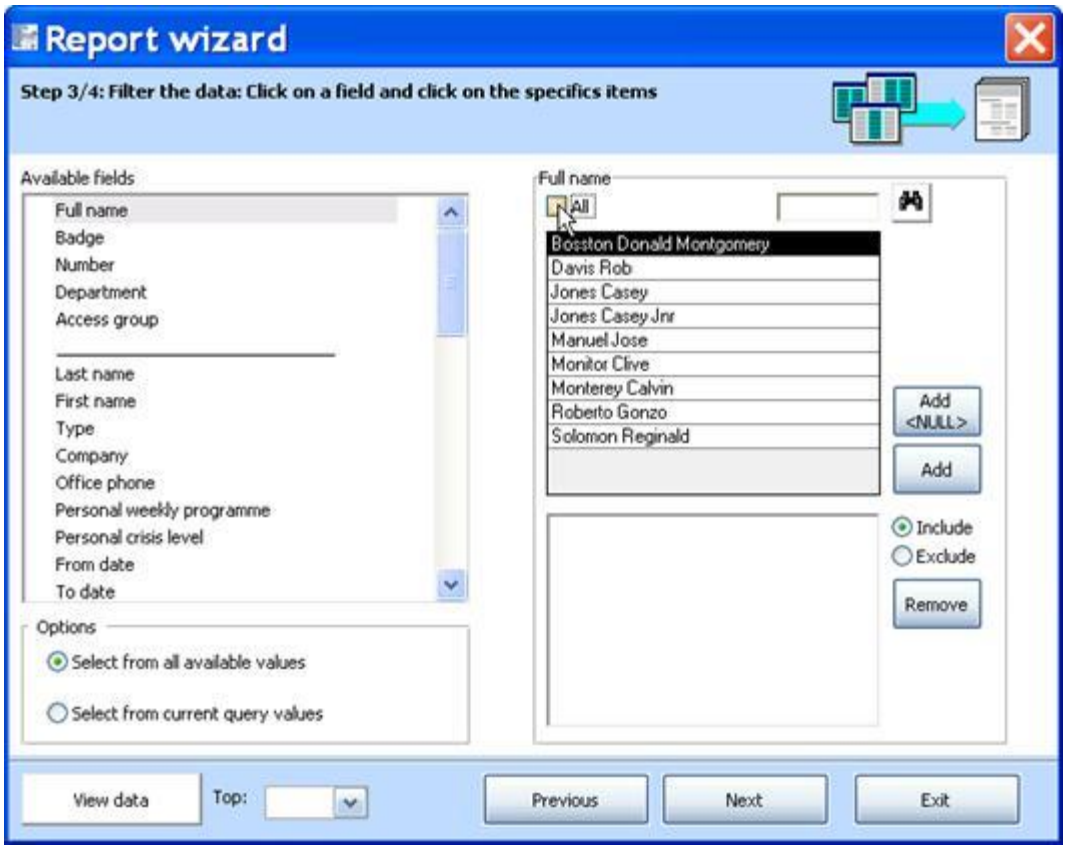
A video recording is linked to this event. A context menu is displayed by right-clicking on it, with the option to launch the video record linked to the corresponding event (for use with the Video Module ONLY)

View data

Click on this button to exit this mode

9.1.4 REPORT WIZARD STEP 3/4 – DATA FILTERING

The third screen of the report wizard allows fine tuning of the report by filtering the data.



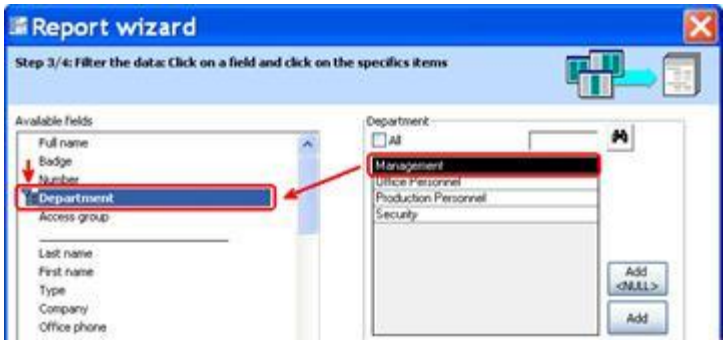
Available Fields - Left Window

The fields selected in the previous screen are shown. Fields to be printed appear first, and other fields, which may be used for filtering even though they will not appear in the report, are shown below a separating line.

Selecting any field in this window displays the corresponding data in the right-hand window. Depending on the type of data field selected, the right-hand window displays the type of filtering available.

Multiple Filters

Multiple filters can be defined. All fields that are already designated as filters are shown in bold, with a filter icon alongside it.



e.g. The department 'Management' has been selected as a Filter. Now, another field can be selected in the left-hand column, and a value chosen in the right-hand column to act as an additional filter, by clicking **Add**

Deleting a Filter

Any filter can be deleted by selecting the field name in the Available Fields window, and clicking 'All' in the Right-hand window, and then clicking again anywhere in the 'Available fields' window.

Available and Selected fields – Right Windows

The upper window shows the values of the selected filed in all records, and the lower window shows those records that have been selected for filtering.

Filtering buttons (Greyed out if '**All**' is selected)

- **Add <NULL>** - Select only records for which the value of the selected field is empty
- **Add –** Select all records with the highlighted data
- **Include/exclude Radio button –** Clicking these buttons toggles between including and excluding the records matching the selected data.
- **Remove –** Removes the selected field from the lower window.

Examples of Filtering Criteria

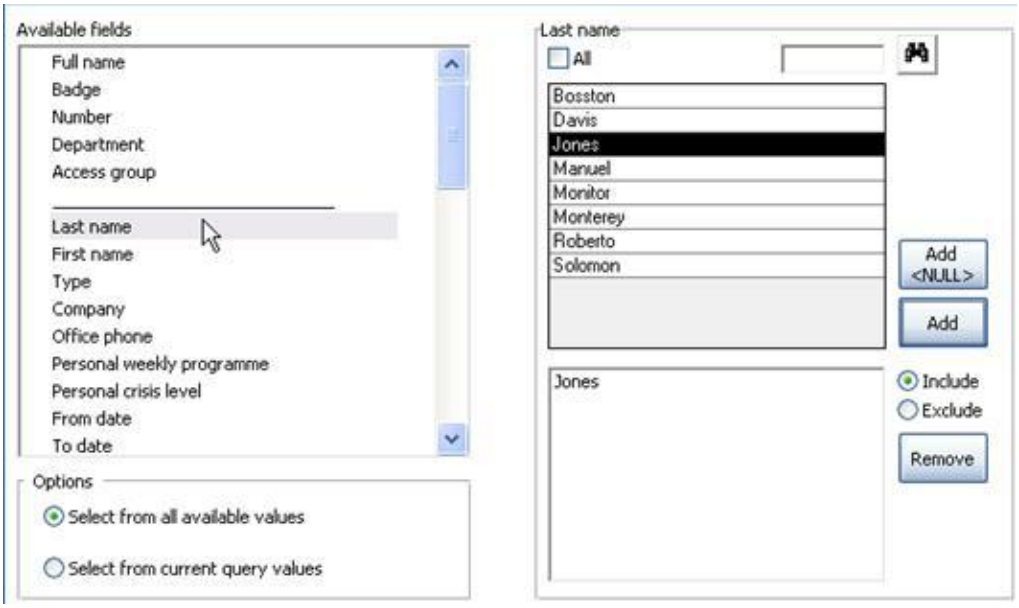
Text Format – (as above) Initially, the 'All' box is selected, and all instances of the field are shown. The filter options to the right of the window are greyed-out (unavailable).

In order to filter on this field, uncheck the 'All' box.

The user can now select individual records by clicking on them, and then use the 'Add' button to include that record in the filtering criteria

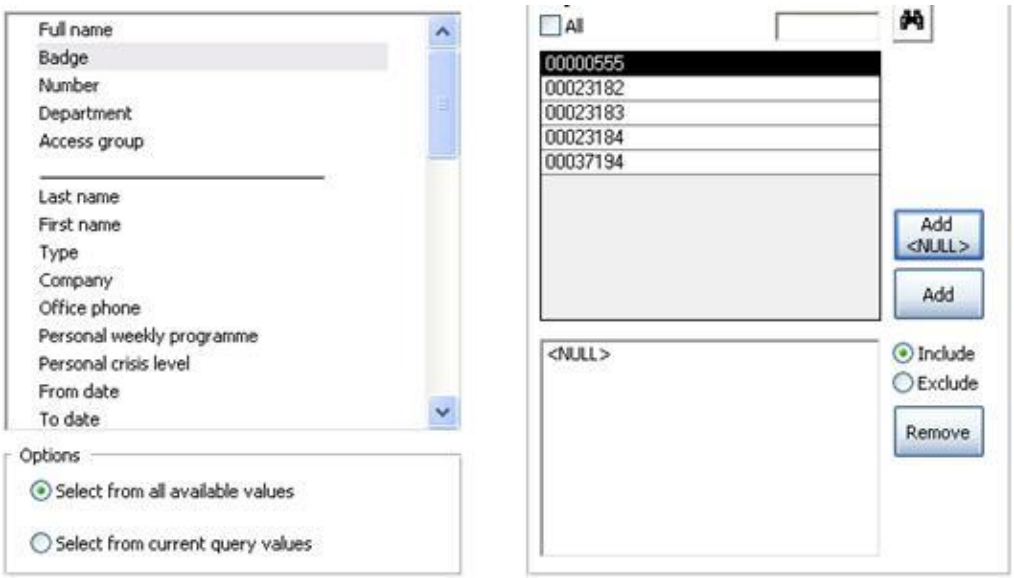
Examples:

- Using the 'Last Name' data field, selecting any record with the name 'Jones' and then clicking the 'Add' button, would produce a report for all the cardholders with the last name 'Jones'.

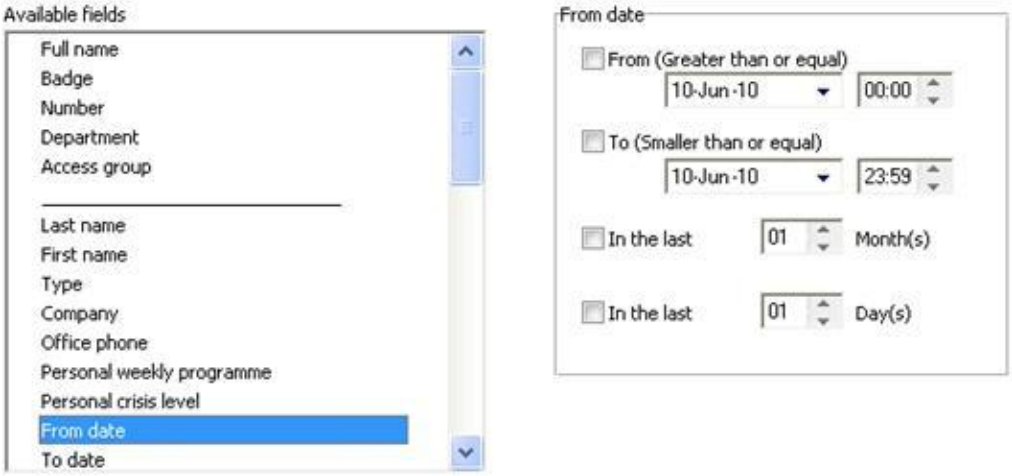


Note: The search criteria do NOT include any wild-card capability.

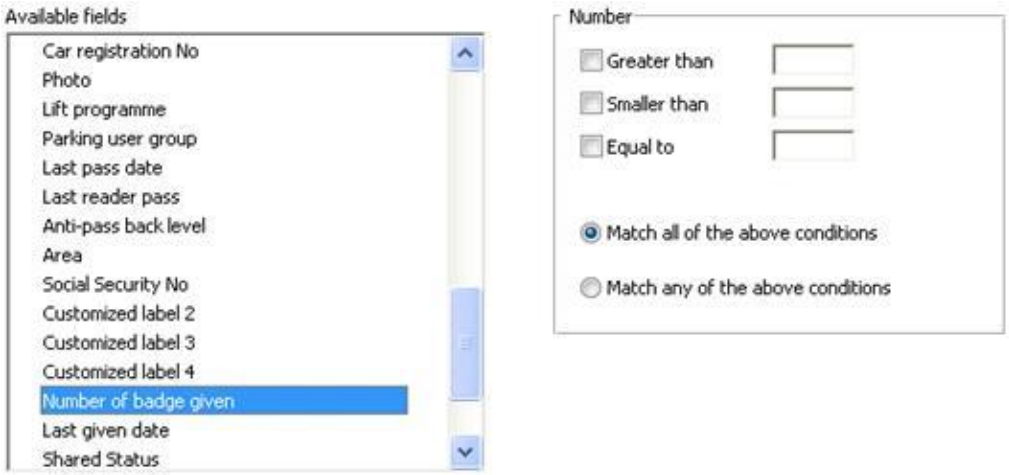
- A report of all cardholders who have not been allocated a badge could be produced by selecting the 'Card' field, and clicking the Add <NULL> button. (Remember to uncheck the 'All' field so that the Filter buttons are active!)



Date Format – User can select 'From', 'To', 'In the last X Months', 'In the last X Days' to limiting the report to a specific period.



Number format - User can select 'Greater than', 'Smaller than', 'Equal to' for limiting the report to one or several specific values



Boolean format - If the selected field has a Boolean format such as Yes/No, True/False (checked/unchecked), use the filters: 'Yes/True', 'No/False' for limiting the report to a specific answer

Select from all available values:

All the data of the selected field appear on the right window

Select from current query values:

Only show records for which the current set of selections applies.

Example: In a Cardholder report, one could filter on a field (e.g. a particular 'Access Group'), and then, by clicking on 'Select from current query values' one could define a further filter based on 'Personal Weekly Programme' and click on 'Add <NULL>' – the resulting report would include ONLY cardholders who had the selected Access Group AND did NOT have a Personal Weekly Programme level associated with them.

View data

Click on this button to preview the content of the data in table form;
Click again on the "View data" button to quit this mode

Top

Enter the number of records or select from the dropdown the number of records to be processed for the View action.

Note: The dropdown gives numbers 'All, 100, 200, . etc., . up to 50,000.
The maximum number of records that can be presented is 50,000.

Previous

Click on this button to return at the previous step of the report wizard

Next

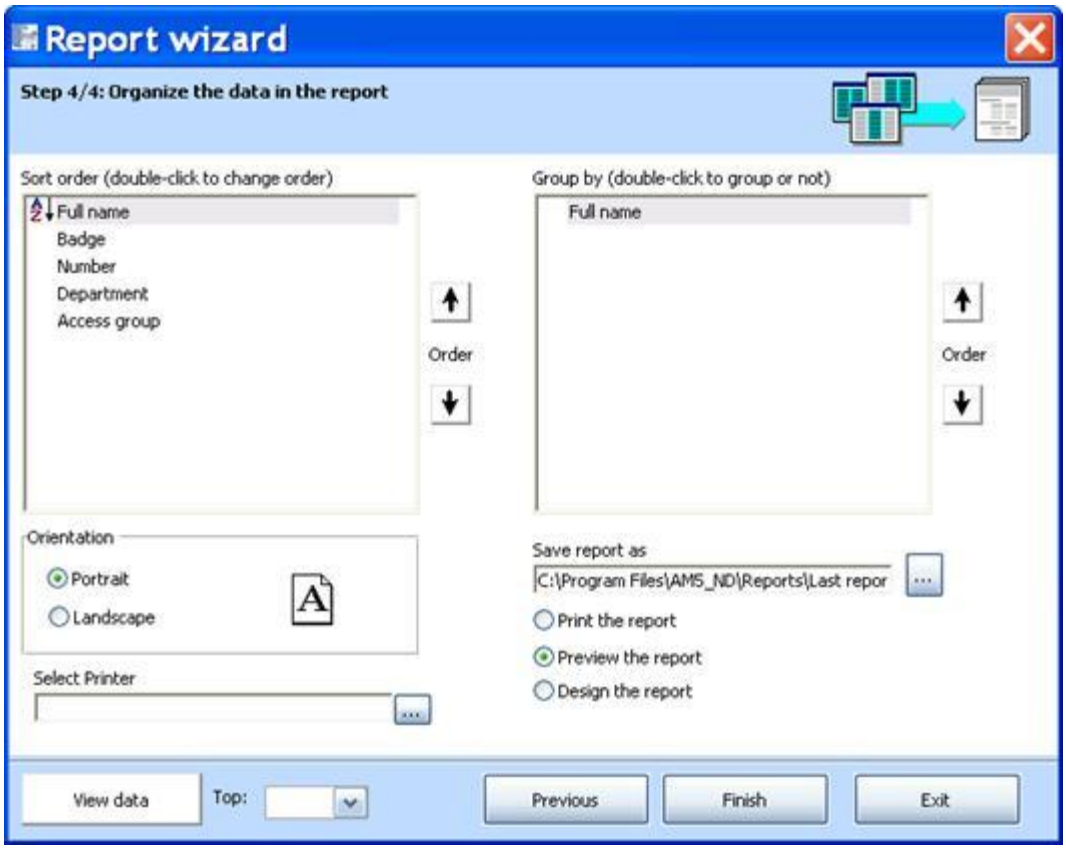
Click on this button to go to the last step of the report wizard

Exit

Click on this button to close the report wizard and go back to the main screen

9.1.5 REPORT WIZARD STEP 4/4 – DATA ORGANIZATION

This last step allows data organization before preview for printing or exporting.



Sort Order window

By default, the records are sorted alphabetically by the first field from the list.
Double-clicking on a specific field will toggle between three possibilities:
Sorted A-Z, Sorted Z-A, Unsorted.
An icon will appear against any sorted field, showing the direction of the sort.
The name of any field selected for sorting will appear in the right-hand window

Grouping Window

All sorting fields show in the Grouping window. Double-clicking on any field in this window will result in a grouping the data in the report based on the contents of the field.
An icon appears to show any fields designated as grouping criteria.
By default, no field grouping is selected.

Buttons ↑ & ↓

Click on these buttons to classify the sorted fields or the grouped fields by importance order.

Orientation

Specify the report orientation (Portrait or Landscape)

Select Printer

Choose a printer for the report.

Save report as

Allows the user to save the current report definition.
Default directory is the application **\Reports** directory
Default name is **Last report.rpx**.

(Thus if two successive reports are saved without changing the name, the earlier report definition will be over-written).
Once reports have been saved in the default directory, with the file extension .rpx, they will appear 'Available reports' window and can be re-used.
To store the report elsewhere, modify the location with […] button.
(Such reports will NOT be available for re-use.)

Note: The .ini option 'Report folder' allows a workstation to store its own reports in a local folder.

Choice of Report destination

Print the report, Preview the report, Design the report

View data

Click on this button to preview the content of the data in table form;
Click again on the "View data" button to quit this mode

Top

Enter the number of records or select from the dropdown the number of records to be processed for the View action. (Max 50,000)

Previous

Click on this button to return at the previous step of the report wizard

Finish

Click to save the report and to execute the selected option
(Print the report, Preview the report or Design the report).

Exit

Click on this button to close the report wizard and go back to the main screen

9.1.6 LIST OF AVAILABLE STANDARD REPORTS

Journal Reports		
	Journal Simple	
	Door Pass	
	Alarm History	
	Active Alarms	
	Door Permissions	
	Audit Relay	
Patrol Reports		
	Patrol Simple	
	Patrol Detailed	
Parameters		
	Controller Networks	
	Controllers	
		Readers
		Inputs
		Outputs
		Local Reflexes
	Daily Programmes	
	Weekly Programmes	
	Holidays	
	Access Groups	
	Departments	
	Badges	
	All Cardholders	
		Access Exceptions
		Scheduled Access Group
		Cardholders and Access Groups
		Vacations
	Visitors	
	Authorization Levels	
	Users	
	Customized Labels	
Event Handling		
	Icons	
	Maps	
	Input Groups	
	Output Groups	
	Actions	
	Processes	
	Counters	
	Global reflexes	
	Inputs in Event Handling Programmes	
Modules		
	Parking Lots	
	Parking user groups	
	Parking Zones	
	Parking presence list	
	Lift programmes	
	Guards	
	DVR	
	Camera	
Other Reports		
	(Lists Reports created by the user)	

9.2 DATABASE TOOLS

In this section:

- *SQL Database Support*
- *Setting up a Secondary Database*
- *Create New Database*
- *Save Database*
- *Restore Database*
- *Switch Database*

9.2.1 SQL DATABASE SUPPORT

During installation, the user is asked to select 'Access' or 'SQL' as the database format. If 'SQL' is to be used, the Microsoft SQL server or MSDE (the SQL server engine) must be installed on the server before installation proceeds.

SQL Setup

In order to use an SQL database, the following conditions must be met;

- The Connection String and Redundant Connection String parameters must be initialized (see below)
- The Dongle must have the entry 'SQL'
- The .ini file must have the entry:

```
DBType = 2
```

Once these conditions are satisfied, the Tools Menu will be modified as follows;

- The *Switch Database* button will be available.
- The Secondary Data Source icon will be shown (this area blank when the primary database is in use)

9.2.2 SETTING UP A SECONDARY DATABASE

When using an SQL database, a secondary (alternate) database can be added.

This can be identical to the main database (but located on another PC) to allow the data source redundancy and guarantee the stability of the system in case the main SQL database, or the connection to it, fails. By checking the **Auto database fail over** box, the server, as well as the workstations, will be preset to switch to a backup SQL database automatically.

Alternatively, the second database can be different from the main database too. In this case, it is possible to switch from a database to the other using the Tools/Switch Database menu.

Notes: This menu option is only visible when:

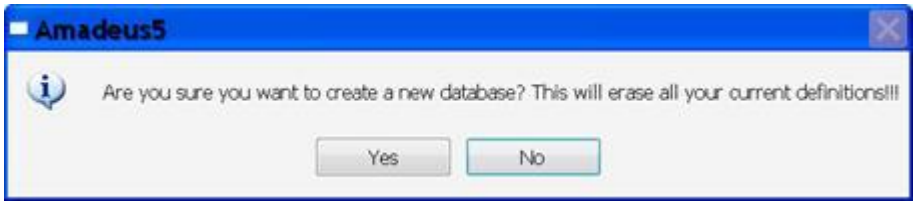
1. The system includes the SQL capability ('SQL' in the Dongle)
2. The Redundant Connection String has been created in the Options/SqlServer/Bio screen

9.2.3 CREATE NEW DATABASE

Caution: This command is NOT available for installations using an SQL database.

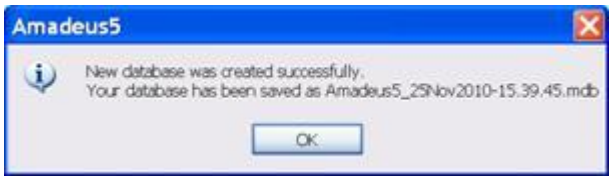
The Application allows the storage of multiple databases. This command creates a new clean database and sets it as the 'active' database. The previously-active database is stored.

Multi If using the Multi-company Module, this option will be available for super-users only (See the "Multi Company Module" chapter for further reference).



A warning message is displayed before applying the request, requiring the user to confirm the request.

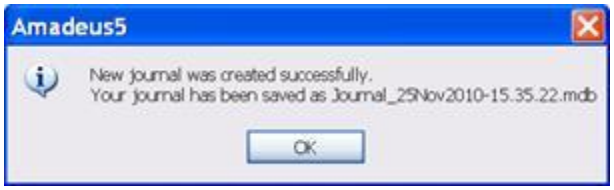
After confirmation, information from the current database is saved. The system displays in a message showing the name of the saved file.



Whenever a new database is created, the existing Journal is also saved and a new Journal is opened.

Saving the Journal: The system will pause immediately after displaying the message confirming that the database has been saved. This is normal – it is the time required to save the Journal.

A message displays the location of the old Journal.



The extension of the file is 'mdb' (Access database only). By default, the files are saved in the "\Backup" sub-folder of the Application directory.

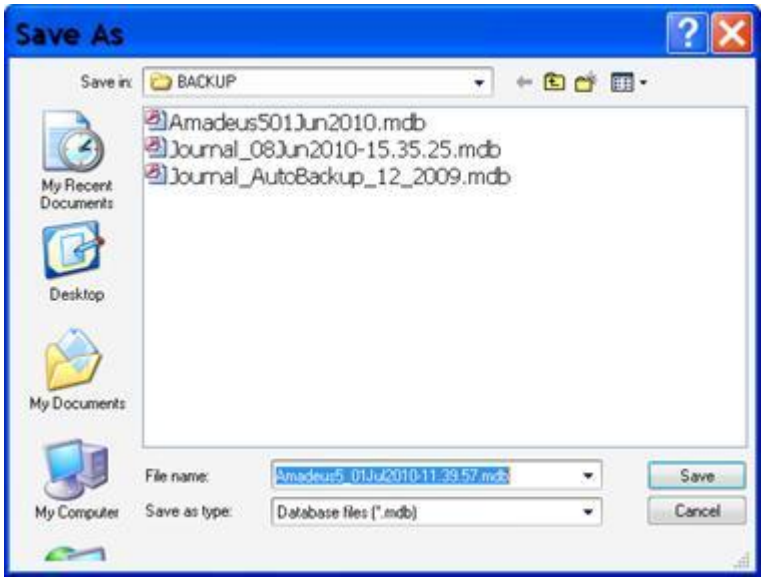
The default destination can be modified in the *Tools/Options/File Location* screen.

9.2.4 SAVE DATABASE

Backups: It is advisable to save the current database regularly.

This command stores the current database.

The Save Database command opens a normal Windows 'Save As' window.



By default, the system names the file to be saved with the current time and date, but the name can be modified. To overwrite a database, select it from the displayed list and confirm or cancel the operation.

The system displays a message showing the name of the saved file.

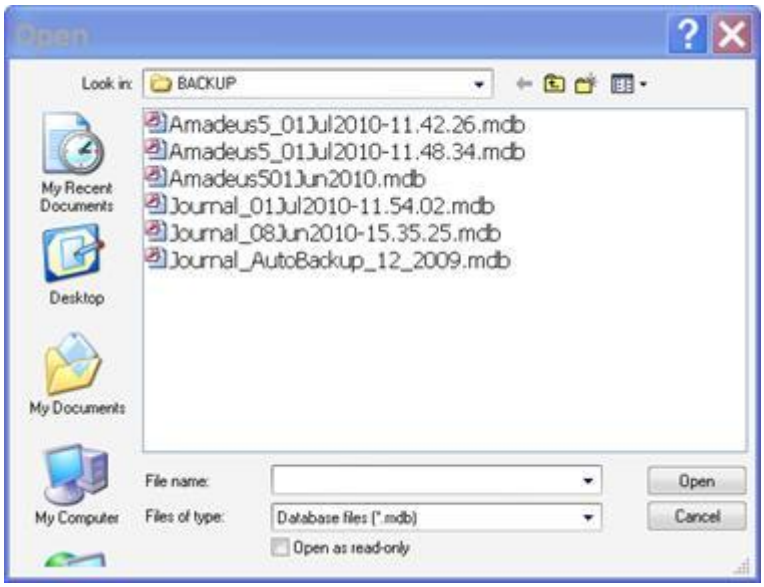
By default, the files are saved in the \Backup sub-folder of the Application directory.

The default destination can be modified in the *Options/File Location* screen.

9.2.5 RESTORE DATABASE

Multi If using the Multi-Company option, this command is available for super-users only
See *Multi Company Option*

This command restores a saved database.



On selecting this command, the system posts the following warning to the Log:

Executing Restore command. This might take a couple of minutes...

The system opens a normal Windows 'Open' screen, pointing at the default directory.

Select the required database file from the list displayed, and confirm or cancel the operation.

- Database files (*.mdb): Default extension for Access database
- Database files (*.jrn): Default extension for SQL database

If the operation is confirmed (and if the chosen file contains a valid database), then the system saves the current database (showing the message 'Your database was successfully saved' and the location), and replaces it with the new one.

By default, the files are saved in the \Backup sub-folder of the Application directory.

The default destination can be modified in the *Options/File Location* screen.

The system should resume operation automatically, using the settings in the database that was used for the 'Restore' command.

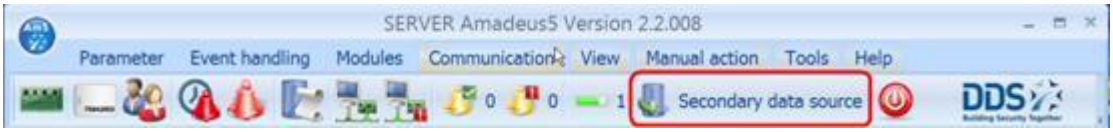
9.2.6 SWITCH DATABASE

Caution: This command is NOT available for installations using an Access database.

When using the SQL database, the user has the option of specifying an alternative database in the *Tools/Options/SQL Server / Bio* screen. The Switch Database screen is only shown **after a secondary database has been defined**.

Clicking on the Switch Database icon signals the SQL server to switch to the previously-defined secondary database

As long as the secondary database is in use, a message is displayed on the Toolbar.



If the 'Switch Database' command is used while the secondary DB is in use, the system will revert to using the Primary DB.

9.3 JOURNAL TOOLS

In this section:

- *Create New Journal*
- *Save Journal*
- *Restore Journal*

9.3.1 CREATE NEW JOURNAL

Caution: This command is NOT available for installations using an SQL database.

A Journal is a database of all the events that occur in the system.

The system allows the storage of several event journals and permits to consult them easily.

For good operating condition, it is recommended not to let the journal grow to more than 150Mb. When the journal reaches this size, it is time to use this command for creating a new journal. This command automatically saves the current journal in a back-up file and creates a new clean one. Then, this clean journal becomes the current journal.

If using the Multi-company Module, this option will be available for super-users only (See the "Multi Company Module" chapter for further reference).

A warning message is displayed before applying the request in case of wrong action.

When the new Journal has been created, the confirmation message is displayed, including the location where the previous Journal was stored.

By default, the files are saved in the \Backup sub-folder of the Application directory.

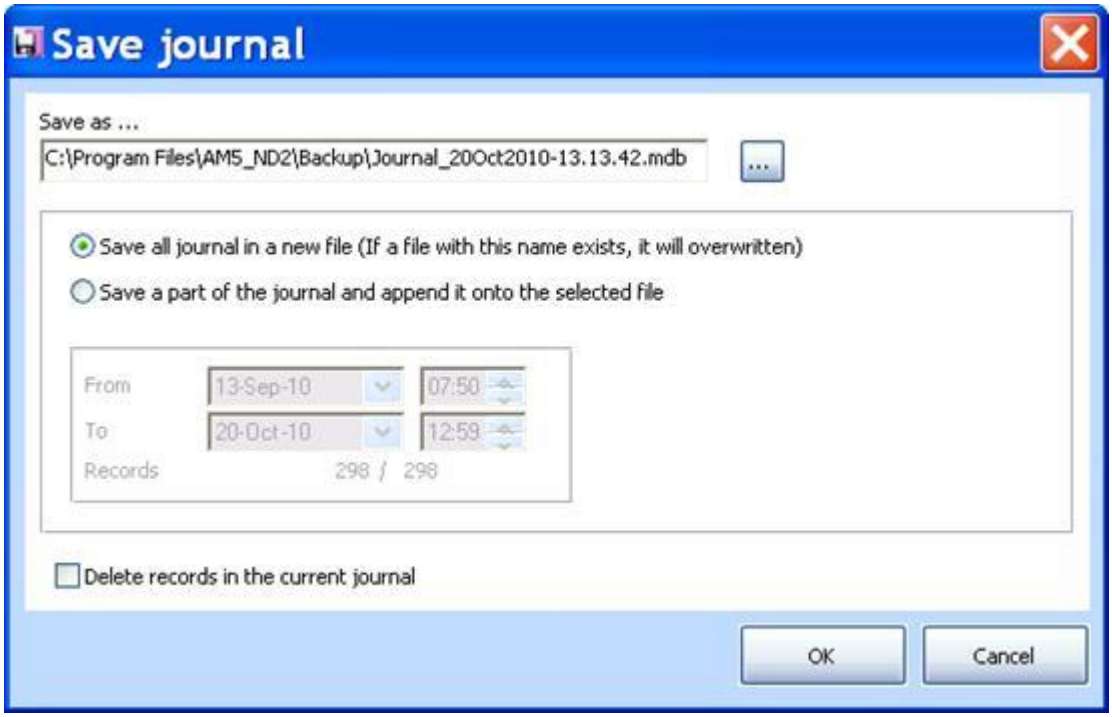
The default destination can be modified in the *Options/File Location* screen.

9.3.2 SAVE JOURNAL

The Save Journal command allows the user to save portions of the Journal - for example, a month at a time. It should be run on a regular basis, each time saving the transactions that apply to the period of time between Saves.

Managing the Journal: The journal grows over time, and it is important to keep it to a reasonable size (recommended not to grow larger than +/-150MB).

See .ini entries *doAskToJournalOnStartUp*, *doAutoJournalEveryMonth*



Save Options

Shows the path and filename that will be used by default. (Default name includes exact time and date the file is created). This can be edited.
Use the […] option to select a different directory.

Radio buttons

Note: In the Save Journal screen, the option "Delete records in the current journal" is set unchecked by default. This is to reduce the chance that the user will delete transactions by accident.

- Save all journal in a new file (If a file with this name exists, it will be overwritten)
- Save a part of the journal and append it onto the selected file

  If this option is selected, the user can select records from part of the Journal only, and append them onto the selected file

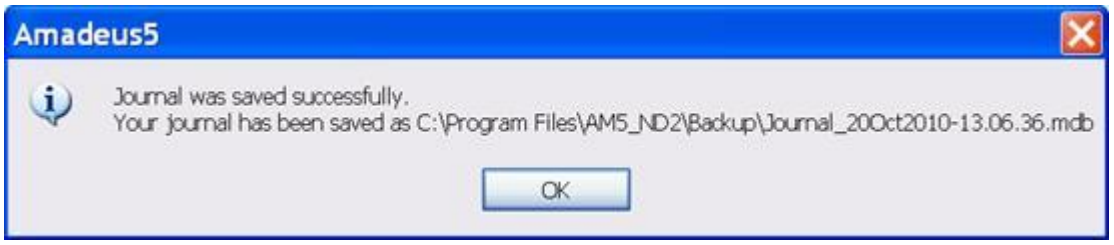
Records: The number of records selected is shown as a fraction of the total records available

Delete records in the current journal

If this box is checked, then ALL records that are to be saved will be deleted from the current Journal

Note: This option should be used with care

The system shows a confirmation message, with the name of the saved file.



By default, the files are saved in the \Backup sub-folder of the Application directory.

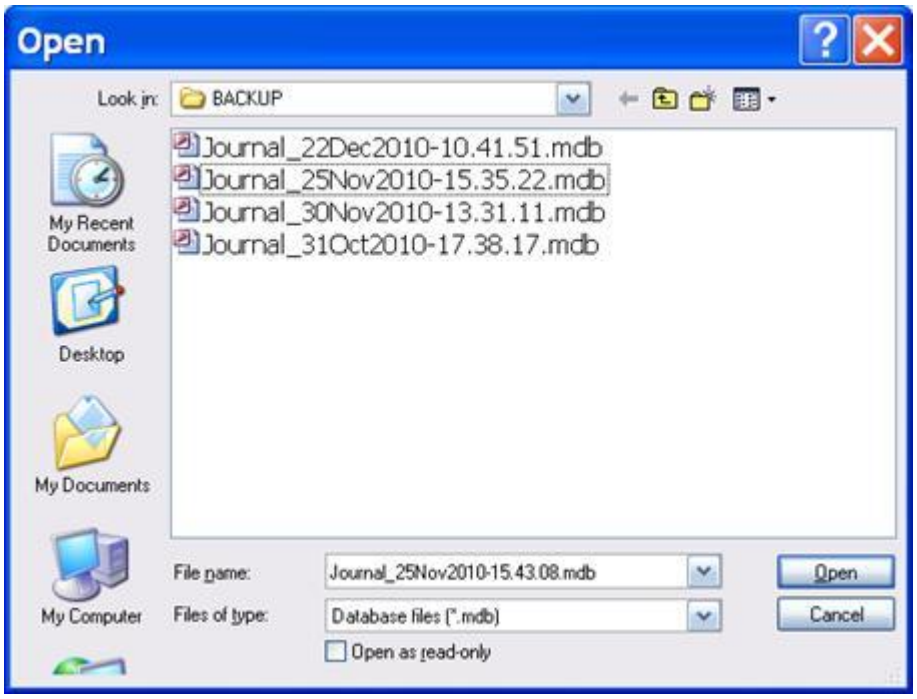
The default destination can be modified in the *Options/File Location* screen.

9.3.3 RESTORE JOURNAL

This command allows a saved Journal to be restored as the active Journal.

Selecting this command opens a Windows file list showing the saved Journals in their default directory.

Note: If using the Multi-company Module, this option will be available for super-users only (See the "*Multi Company Module*" chapter for further reference).



Look in

Select the folder where is located the required journal. By default, the selected folder is: "C:\ProgramFiles\5\Backup". This default destination can be changed in the *Tools/Options/Files Location* screen

File name

Enter the filename of the journal

Files of type

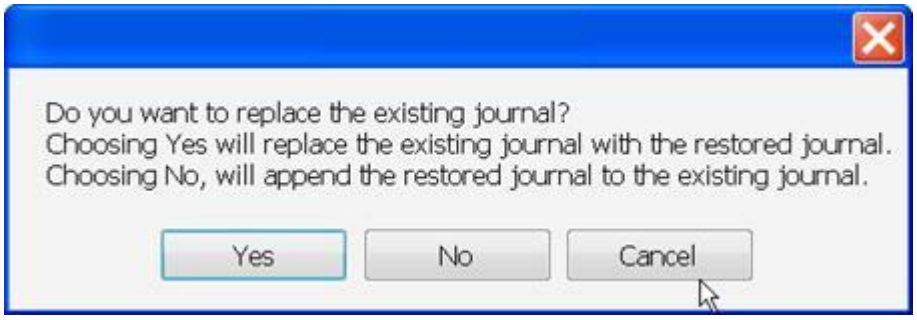
Select the file type

- Database files (*.mdb): Default extension for Access database
- Database files (*.jrn): Default extension for SQL database
- All files (*.*): Ability to open a journal created by other applications

Open as read-only

Check this box if the journal is loaded for consultation only.

To restore a journal, select it from the list displayed and select the appropriate action from the choices offered


Do you want to replace the existing journal?
Choosing Yes will replace the existing journal with the restored journal.
Choosing No, will append the restored journal to the existing journal.
Yes
No
Cancel

Once the restoring is done, the system displays a message (see below), with the filename of the former journal.

The saved file is a copy of the Journal file before the Restore action

9.4 CARDHOLDER TOOLS

In this section:

- *Create a Group of Badges*
- *Cardholders Import Profile*
- *Important Cautions regarding fields used for Imports*
- *Multiple Access Group Wizard*

9.4.1 CREATE A GROUP OF BADGES

This screen allows the creation and deletion of a group of badges using a single command. It is accessible via the *Parameter/Badge* or *Tools/Create a group of badges* menu.

CREATE A GROUP OF BADGES – CREATE TAB

Create a group of badges in a single command using this tab.

First card code

Type the code assigned to the first badge. Length (8-12 char) is as set in the *Reader/Miscellaneous/Badge Format* screen.

Note: A beginning card code common to all badges can be set in the *Tools/Options/General* screen.

Caution: The Create Group of Badges screen supports ONLY decimal codes – it cannot be used for Hexadecimal badges.

Number

Type or select the number of badges to create.
The maximum number of badges depends on the dongle limitation.

Type

Choose the badge technology from the displayed list (Magnetic, Wiegand, etc.).

Note: The choice of reading technology will enable selective data download to the readers. Only data compatible with the selected technology will be downloaded to the readers.

Position to increment (between 1 and 8)

Define the position of the digit to increment in the 8-digit sequence making up the code. This allows keeping a constant group of digits as code endings.

Example

First card code	Position to increment	The next code:
12345789	5	1234**6**789

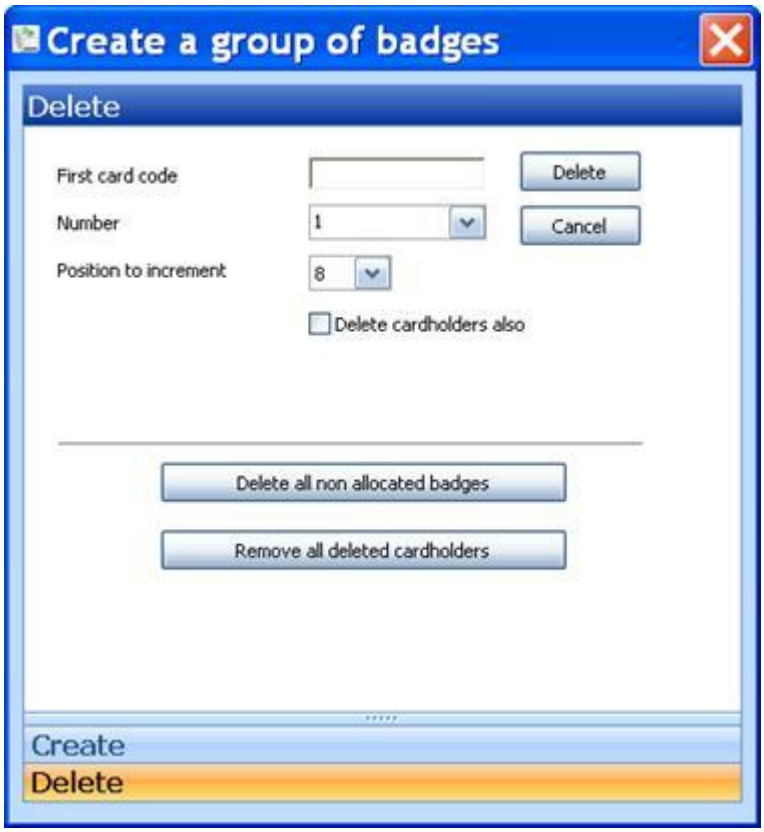
Create cardholders also

Create simultaneously a group of badges and their associated badge holders, which will have:

- Basic parameters: Valid employee parameters to whom the "Anytime Anywhere" access group is attributed
- Set parameters same as: Specify the name of the badge holder whose parameters will serve as reference for the new badges

9.4.2 CREATE A GROUP OF BADGES – DELETE TAB

Remove a group of badges in a single command using this tab.



First card code

Type the 8-digit code assigned to the first badge
(Only decimal codes are supported, not Hexadecimal)

Number

Type or select the number of badges to delete

Position to increment (between 1 and 8)

Define the position of the digit to increment in the 8-digit sequence making up the code. This allows keeping a constant group of digits as code endings.

Example

First card code	Position to increment	The next code:
12345789	5	1234**6**789

Remove cardholders also

Delete a group of badges and at the same time, delete their corresponding cardholder records

Remove all non allocated badges

Delete all cards that are no longer allocated, i.e. temporary cards

Remove all deleted cardholders

Select to remove all deleted cardholders from the database

9.4.3 CARDHOLDERS IMPORT PROFILE

The Cardholder's Import facilities allow data about new cardholders and updates to existing cardholders to be imported directly into the system from external databases. Usually the employees' database is created and kept up-to-date in the Human Resources department. All databases compatible with ODBC standards (Open DataBase Connectivity), such as SQL Server, Oracle, MS Access, etc.) can easily transfer data to the application.

The cardholder database information can include **cardholder**, **badge**, **access group** and **department** records.

The application uses a DSN (Data Source Name) to define the data structure that contains the information in order to use it. By default, the system provides two Data Sources (DSN): Microsoft Access and Microsoft Excel.

OPERATING MODE

- Create a DSN from the ODBC DS Wizard (consult ODBC Help for further information) or use one of the default DSN definitions (HRAccess and HRExcel).
- Check that the table format is compatible with the Application or write an SQL query to modify it.
- Define an import database profile, as described hereafter, and import the table.
- If imports are to be done on an automated basis (e.g. every night/weekend), then use the *Event Handling/Action* screen to create an "Import Cardholders" action with the selected profile.
  If imports are to be done manually on-demand, then the 'Import now' button on the *Cardholder Import Profile/General* screen can be used.

See *Importing Data from External Databases - Examples*

9.4.3.1 CARDHOLDERS IMPORT PROFILE/GENERAL

This screen defines Import Profiles and allows data about cardholders to be imported directly from an external database

Select a profile

Choose a profile; two profiles have been provided by default (HrAccess and HrExcel).

Import now

Press on this button to launch the import operation.
The beginning and end of import messages will be displayed in the log screen.

Name

Name the new import profile.

Default Access Group

Specify the default Access Group that will be allocated to people who do not have an AG assigned. To create a new one click the [...] button.

Import log file

Specify the filename of the import log file that records information about the import process. By default the name of this log file is "Import.log" and is located in the Application directory. To modify this location, click on the [...] button. See also the "Import Database Log only errors" option in the *Tools/Options/Server* screen.

Description

Free text

Synchronize and delete

Check this box for deleting existing cardholders if they do not appear in the import file or the external database.

Do NOT use this function when combining data from two different external databases. If data for the system is drawn from more than one database, then when importing from a second database, any cardholders in the first database whose records are not in the second one, will be DELETED.

9.4.3.2 CARDHOLDERS IMPORT PROFILE/CONNECTION SETTINGS

This screen allows the definition of import profiles.

Select a profile

Choose a profile.

Import now

Press on this button to launch the import operation.

ODBC Database Source Name (DSN)

Name the database connection.

User name

Enter a user name.

Password

Enter a password.

Choose one of the following options:

- **Table name**: Enter the name of the table containing the data information.
- **SQL statement**: Type in an SQL query that adapts the table to the required Application format. (Field titles must be the same as in the HR file) (for advanced users only)

Set connection

This button is a shortcut to ODBC user data source, which stores information about how to connect to the external database (refer to ODBC help for further information).

For advanced users, it is possible to create new import profiles by creating new DSNs

Connection test

Select to check that the external database has been successfully opened.

Notes:

1. When importing, each cardholder is downloaded to each controller.
   To save time, it is possible to import without downloading, by setting the .ini option
   ImportwoDownload = 1
   After the Import, an Initialisation (complete) must be used to resend all cardholder information

9.4.4 IMPORTANT CAUTIONS REGARDING FIELDS USED FOR IMPORTS

1. The field [Number] is mandatory. This is the primary key, corresponding to the Number field in the cardholder screen. This must be unique.
2. The field [Last Name] is mandatory
3. [Last Name] and [First name] are case sensitive
4. The combination [Last Name] and [First name] must be unique,
   unless the .ini setting
   AllowDuplicateName = 1
   is used.
5. The field [Badge] must be unique. If a new cardholder is imported with a badge which is already allocated, the card will be deleted from the existing cardholder's record, and allocated to the new cardholder.
6. If an existing cardholder is imported with a new badge, his existing badge will be deleted
7. Cardholders that do not belong to the remote database are removed from the Application database, when the option "Synchronize and delete" is selected.
8. New Access Group names are automatically created in the Application database
9. If an imported badge number is already allocated to an existing cardholder in the Application database, the old badge is removed from the existing cardholder and the ID number is associated to the imported cardholder.
10. If an imported cardholder has already a badge in the Application database, the system deletes the other badge.

9.4.5 MULTIPLE ACCESS GROUP WIZARD

This wizard sets out a 4-step process that allows the operator to make changes to multiple Access Groups for multiple cardholders in one operation.

> Note: At least one cardholder must have been defined with multiple Access Groups before the MAG Wizard is available

9.4.5.1 MULTIPLE ACCESS GROUP WIZARD - STEP 1

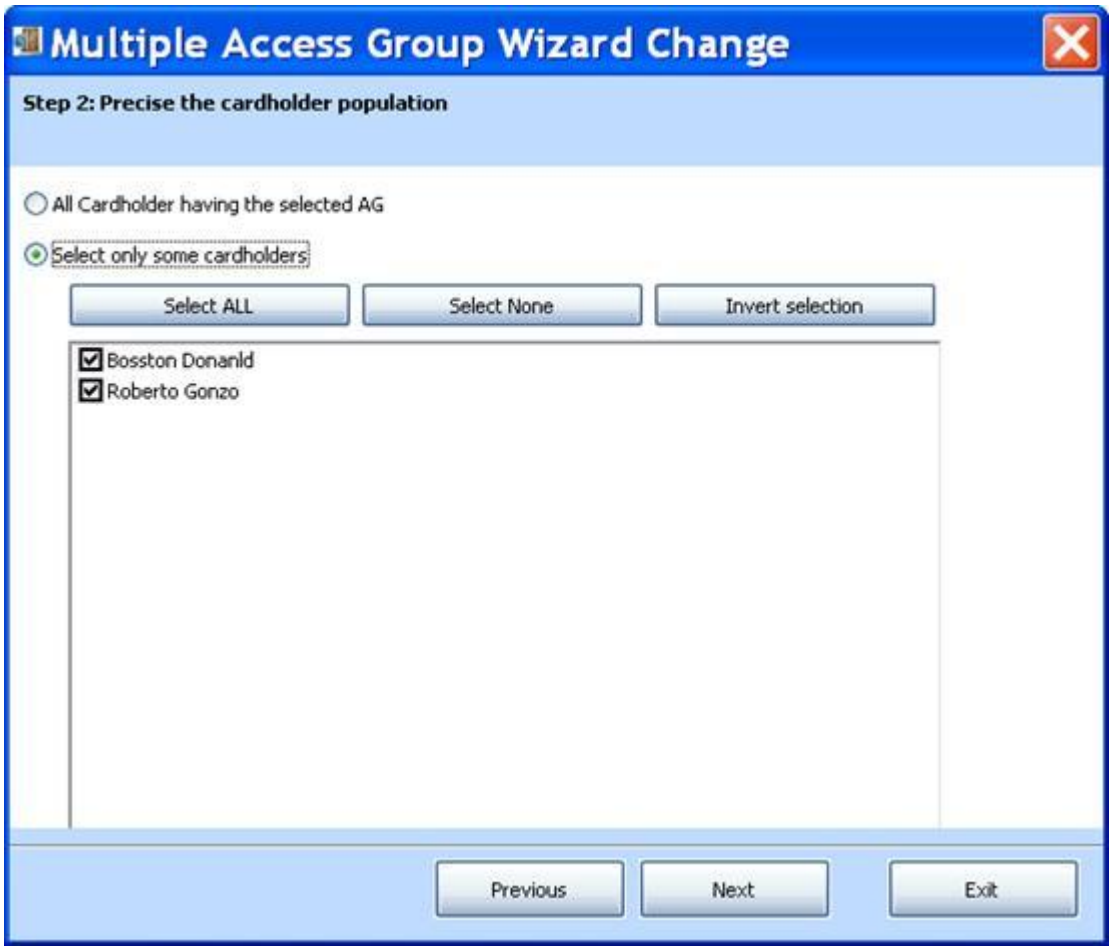
This screen lists all the Access Groups that are already in use as Multiple AGs. By selecting one of them, all the cardholders that are associated with that AG will be selected and shown in the next step. If more than one AG is selected in this screen, then all the cardholders that associated with **all** the selected AGs will be selected.

Multiple Access Group Wizard Change
Step 1: Tick an Access Group in order to multi-select all the cardholders that have it allocated as one of their AG. Note: If you tick more than one AG, the wizard will affect only cardholders that have ALL the selected AG you selected.
Factory Staff
General Anywhere Anytime
Office Management
Office Staff
Previous
Next
Exit

Select one or more Access Groups.

9.4.5.2 MULTIPLE ACCESS GROUP WIZARD - STEP 2

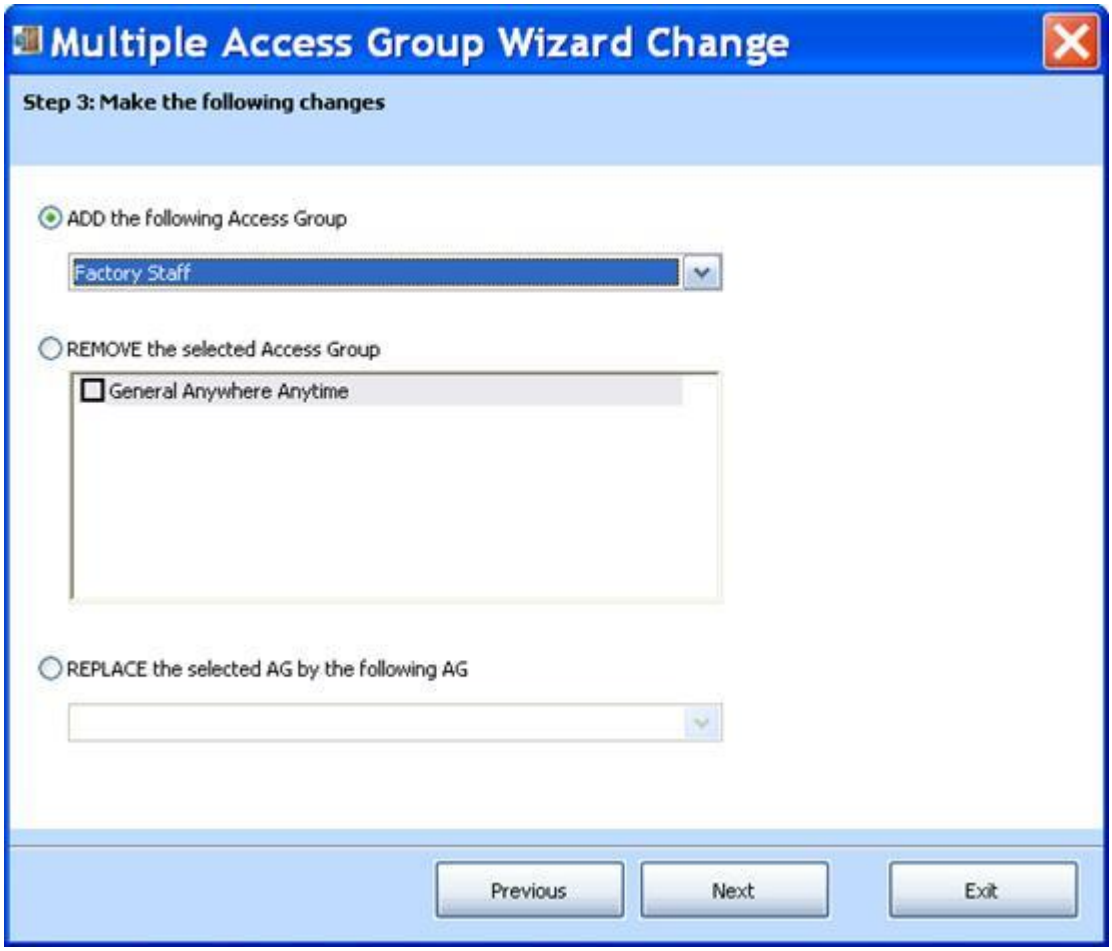
This step displays all the cardholders who currently have ALL the selected AGs assigned to them.



The user can choose to apply the changes to all the displayed cardholders, or can select individuals and apply the changes only to them. The 'Select ALL', 'Select NONE' and 'Invert selection' buttons make this process easier.

9.4.5.3 MULTIPLE ACCESS GROUP WIZARD - STEP 3

This step defines changes to be made to the selected cardholders



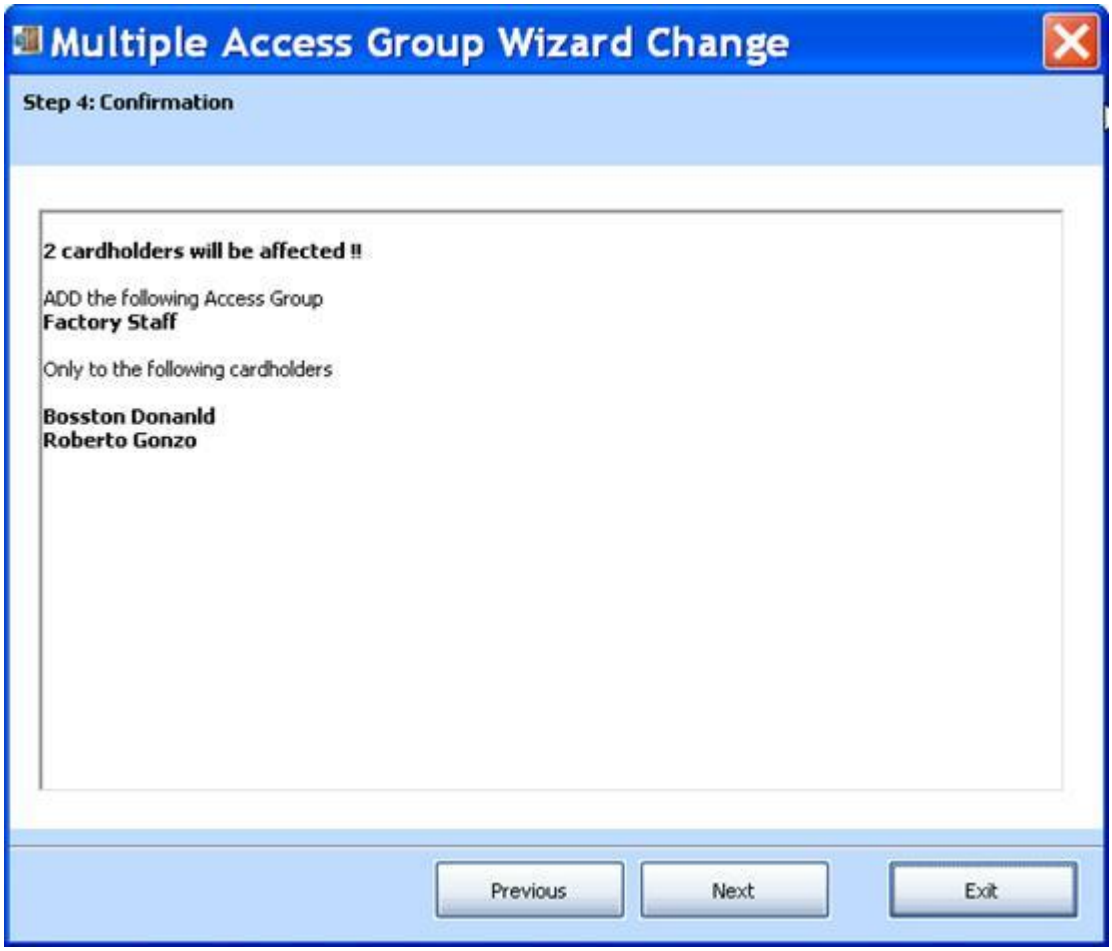
A new Access Group can be added.

One or more AGs can be removed.

Existing AGS can be replaced by others.

9.4.5.4 MULTIPLE ACCESS GROUP WIZARD - STEP 4

This step summarizes the user's choices.

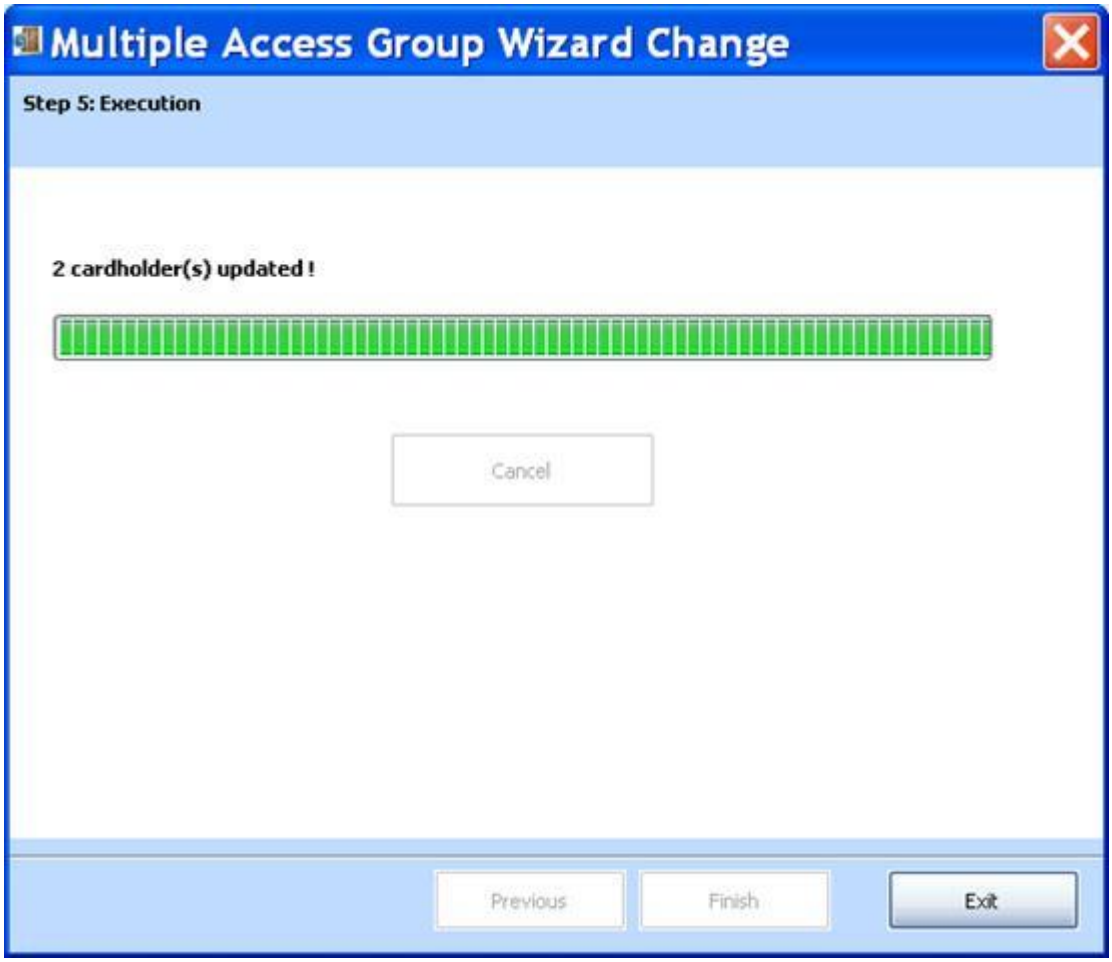


The screen shows how many cardholders are affected, the nature of the changes which AGs are concerned, and a list of the affected Cardholders.

Press Next to confirm and update the selected cardholders' records.

9.4.5.5 MULTIPLE ACCESS GROUP WIZARD - STEP 5

This step displays progress in processing the changes requested. When the job is finished, press Exit to finish execution. Audit information concerning each affected cardholder is stored in the Journal.



Note: Clicking 'Cancel' will stop operation and no further records will be processed. However, records that have already been affected will NOT be reversed.

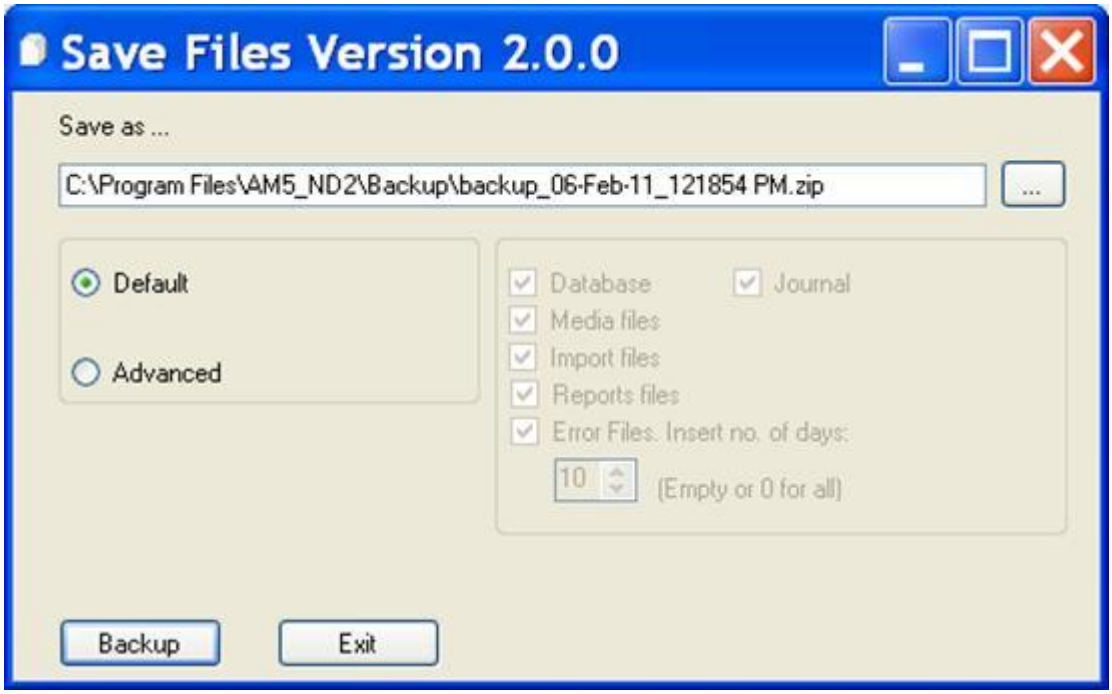
9.5 OPERATOR TOOLS

In this section:

- *Save Files*
- *Options*

9.5.1 SAVE FILES

This screen is for maintenance purposes. It allows the user to manually back up all the necessary files in a single .zip file.



Save As

By default, this file is named with the current date and time as part of the filename. The backup path, as well as the filename, can be edited by the user.

Default/Advanced radio button

☉ Default – all choices are greyed-out, and the following files will be saved:

- all .ame files
- Database and Journal
- import files (e.g. hr.mdb and hr.xls)
- \Media folder
- \Report folder

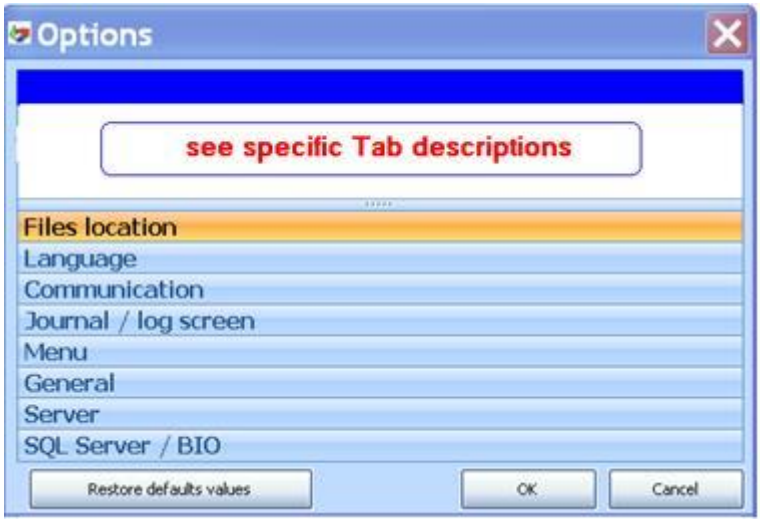
☉ Advanced – the user can select which files/s are to be saved by checking the corresponding boxes

Backup

Clicking the Backup button starts the operation.
The message 'Saving files, please wait . . .' is displayed while the Save operation is in progress.
On completion, the message 'Backup completed successfully. Press Exit to return to the application' is displayed.

9.5.2 OPTIONS

This screen defines the user settings of the Application.



The following tabs are available in the Tools/Options screen:

Files Location	*Language*	*Communication*	*Journal / Log screen*
Menu	*General*	*Server*	*SQL Server / BIO*

Under each tab, the following buttons are always displayed:

Restore Default Values

Resets all Default Values – selecting this button will reset all Options to the system default settings.

A message is displayed requiring the Application to be restarted.

Use with care: Note that ALL options are reset, not only the selected Tab.

OK/Cancel

For all Option tabs, the OK/Cancel button allows the user to activate or cancel any changes made in the settings for that Tab.

9.5.2.1 OPTIONS/FILE LOCATION

This tab defines the location of the database files, the background picture of the main screen, and the Report folder.

Databases folder

Choose the default files location:
Select the **Current folder** radio button or select the **At** radio button to enter a different folder
(The current software folder will be shown when this is selected. When used for the first time, the current Application folder is selected)

Background filename

Select the desired file by using the […] button.

Stretched

Check this box to stretch the selected background picture on the entire screen.

Report folder

Choose the reports files location:
"Report" folder in current folder: The software folder, by default.
At: Indicate the desired directory by using the […] button

Restore Default Values

Resets all Default Values – selecting this button will reset all Options to the system default settings
Use with care: Note that ALL options are reset, not only the selected Tab.

OK/Cancel

For all Option tabs, the OK/Cancel button allows the user to activate or cancel any changes made in the settings for that Tab

9.5.2.2 OPTIONS/LANGUAGE

The Application supports many languages. Specify the requested language and confirm your choice. You will be instructed to reboot the application in order for the new language setting to take effect.

Translate in

Select from the list the required language. All screens and menus will be translated.

Application font

Select the desired font. Used for all menus and screens.

Font according to the language

Select the font type according to the alphabet used (Chinese, Western, etc.)

Test

Example to allow checking how the selected font is displayed.

Restore Default Values

Resets all Default Values – selecting this button will reset all Options to the system default settings

Use with care: Note that ALL options are reset, not only the selected Tab.

OK/Cancel

For all Option tabs, the OK/Cancel button allows the user to activate or cancel any changes made in the settings for that Tab

Other Options – see *Options*

9.5.2.3 OPTIONS/COMMUNICATION

Default communication parameters are defined in this tab. Changes in this tab do not require the Application to be restarted.

This tab will NOT be displayed if the application runs as a Workstation.

Do polling at start-up

Check this box to execute polling when loading the application.

(This option is selected by default).

To Stop/Start Polling by User action (Use with caution): The Communication menu can have a 'Stop/Start Polling button by setting the following entry in the .ini file:

EnableStopPolling = 1

"Minilock" controllers support

Check this box if 'Minilock' controllers are used.

Relay definition

Check this box if TPL revision B controllers are used.

(Sets application to use the older commands for these controllers)

Daily program time zones

Set number of time zones to allow in Daily Program: 2 (by default) or 4
(See *Daily Programme*)

Trial number of sending messages

(1 to 10). This sets the number of times a command will be sent to the controller in case of communication problems between PC and controller (3 by default).
(See also "Time out delay" in *Controller Network*).
If the command is still not received after this number of retries, this command joins the "Pending" commands and the PC will try to send it with the other pending commands once communication is re-established
(see "Resend pending" option below).

Communication error time out (in seconds)

(1 – 300 secs) (30 by default) This sets the delay beyond which the computer will signal a communication problem, in there is no communication between PC and controller. After this time, the application adds a polling icon with '**!**'on the main toolbar
(See also "Time out delay" in *Controller Network*).

Distant connect on pending

Check this box to perform automatic modem dial-up every time when pending commands are to be sent
(See Updating Remote (Dial-up) Controllers via the Modem)

Resend pending every X Min.

No. of minutes. (1 to 1440) Frequency of sending pending commands to controllers. Pending commands are commands that were not received by controllers (due to a communication problem) and will be sent again, every x minutes (30 mins. by default) till the communication is re-established.

Check validation of cardholders every X Min.

No. of minutes. (1 to 1440) Interval between checks if cardholders information (i.e. time-related definitions – From/To date, Schedule AGs, Exceptions) needs to be added/deleted from controllers validating or invalidating, in which case the corresponding cardholders definitions are sent to the controllers. Default frequency 30 minutes.

Note: This setting only sets the **interval** between checks, not the actual time at which they take place – Thus, when setting From/To times, in order to be sure that controllers are updated in time, the user must allow for the update being sent from the server up to the specified amount of time before the time setting is required. (for instance, see *Cardholder/Schedule AG*)

Baud rate (bps)

Select the required controller communications baud rate from the dropdown list. This rate is the same for all the controllers.
Default rate is 9600 bd.
57kbds & 115kbds are supported on all MEGA and on TPL controllers having firmware version dated 02/07/04 and later.
To display the baud rates in the dropdown list, the ini option 'Allow57k = 1' must be set.

Set current Baud rate

Click this button to update all controllers to the selected baud rate (immediate)

Bioscrypt Baud rate

Select the baud rate for Biometric Reader communications to be used on the separate network connecting biometric readers to the PC. This rate is the same for all the biometric readers.

Second precision in controller memory

Check this box to set the controllers to send the exact seconds value of an event.

Notes:

1. *A one-time initialization of all controllers is required when this setting is changed.*
2. Only supported on controllers with firmware dated later than 01/06/2004.

   Not supported on NSL controllers.

Sleeping Delay (ms)

1-5 ms. (Default 2 ms) Waiting delay between two consecutive commands that PC sends to the controllers. (See .ini setting *SleepingDelay*)

TCP

Ping Timeout (ms)

50-60000 ms. (Default 500ms) Maximum delay that PC gives to the TCP/RS485 converter to answer after a Ping (i.e. a request from the PC to the converter).

Wait until next ping (s)

2-300 ms. (Default 20ms) Delay before pinging again when the TCP/RS485 converter does not answer after the first ping.

Restore Default Values

Resets all Default Values – selecting this button will reset all Options to the system default settings

Use with care: Note that ALL options are reset, not only the selected Tab.

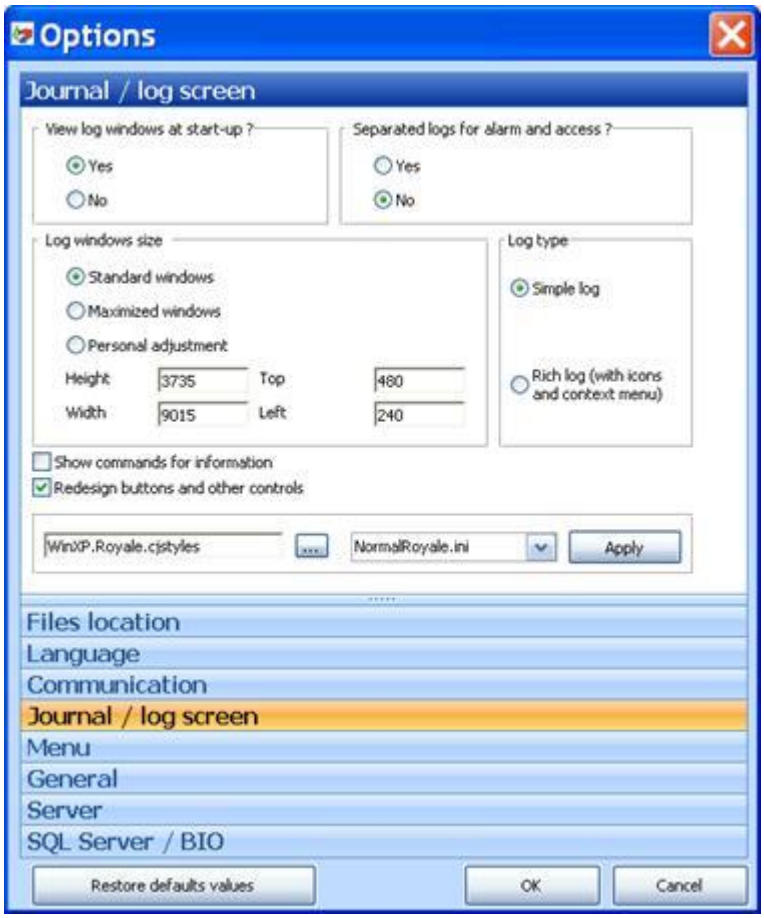
OK/Cancel

For all Option tabs, the OK/Cancel button allows the user to activate or cancel any changes made in the settings for that Tab

9.5.2.4 OPTIONS/JOURNAL/LOG SCREEN

This tab allows the user to customize the Log screen and the applications screens (see *Log Window*)

Changes in this tab do not require a restart of the application.



Basic Viewing Options:

- view/hide log windows at start-up (This can also be toggled by clicking on *View Log* in the *Communication Tab*)
- separate log windows for alarms and access,
  (see in *Split Log Option*)
- define a customized log windows size,
  (set in .ini file options – see *.ini File Log*)
- show simple or rich log
  (see *Rich Log option*)
- hide or show system commands for information.

Rich Log

Rich log sets the log to include icons linked to events and a context menu. It is available by choosing the 'Rich log' option on the *Tools/Options/Journal / log* screen. Its main use is for viewing historical video records directly from the event log. Details of how Log entries are shown are given in *Tools/Options/Menu*

Re-design buttons and other controls

Checking this box allows user to choose alternative skin and styles for the data screen display. (The main user interface screen does not change)

Clicking 'Apply' allows the selected options to be viewed without saving the setting, so the system will revert to the previous setting on the next restart.

Restore Default Values

Resets all Default Values – selecting this button will reset all Options to the system default settings

Use with care: Note that ALL options are reset, not only the selected Tab.

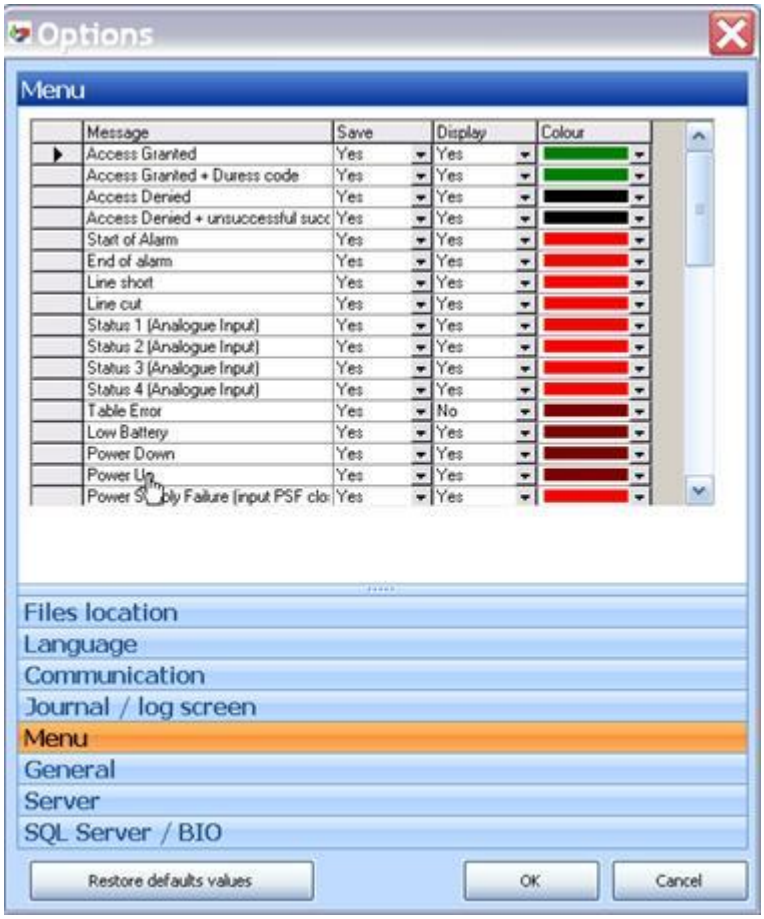
OK/Cancel

For all Option tabs, the OK/Cancel button allows the user to activate or cancel any changes made in the settings for that Tab

9.5.2.5 OPTIONS/MENU

This tab allows the user to specify which event types will be saved in the journal and which will be displayed in the log. Display colours can be set for the messages chosen to appear in the log. (see also *Log Window*).

Changes in this tab do not require the Application to be restarted.



Message

Name of the event type.

Save

Select 'Yes' for saving this event type in the Journal.
By default, all event types are stored in the Journal.

Display

Select 'Yes' for displaying this event type on the log.

Colour

Select the message colour for log display; see View / Clear Log for the default colours of the messages.

Default colours for messages are:

Burgundy: Unknown badges (not recognized by the system), non-allocated badge (recognized by the system but not allocated) or system alarms, such as Low Battery, Power Up, etc.
Red: Start and End of Alarm
Green: Access authorization and a normal communication status (OK)
Black: Access denied (reason for the denial is shown), User commands
Grey: System commands, provided for informational purposes.
(see 'Show commands for information' in *Tools/Options/Journal/Log* screen)
(by default these are not shown)
Blue: Audit information (New/Save/Delete record)
(by default these are not shown)
Note: To build an audit report of changes to database records made by users, Save the following record types in the Journal; New Record, Save Record and Delete record.

Restore Default Values

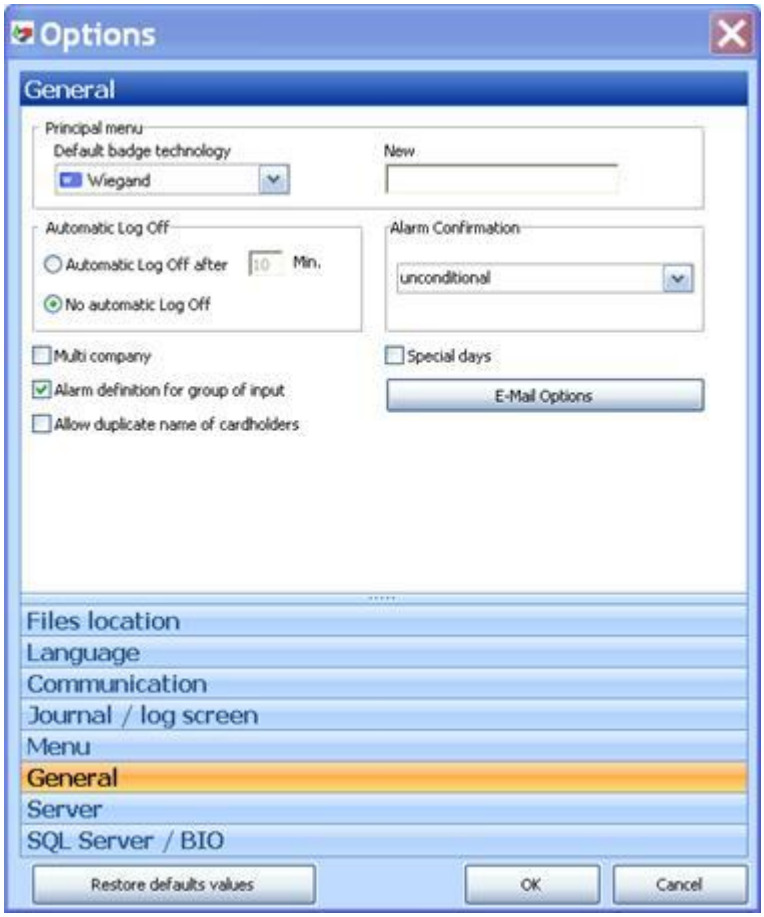
Resets all Default Values – selecting this button will reset all Options to the system default settings
Use with care: Note that ALL options are reset, not only the selected Tab.

OK/Cancel

For all Option tabs, the OK/Cancel button allows the user to activate or cancel any changes made in the settings for that Tab

9.5.2.6 OPTIONS/GENERAL

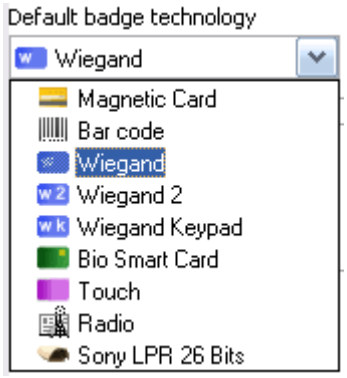
Changes in this tab do not require the Application to be restarted.



Principal Menu

Default badge technology

This field allows definition of the general default badge technology for the system. This technology may however be changed on a specific badges (*Badge* screen)
Select from pulldown



Default card technology is set to Wiegand.

New

Card Ranges:

Where all the card codes start with a same prefix (for example 050012345, 050012346, etc.), a default 'range prefix' can be set in this 'New' field. (i.e. 0500).

The prefix chosen will then be automatically added at the beginning of the code when a new badge is created. This is helpful when the prefix is not printed on the badges.

Automatic Log off

Use radio button to select whether Users (Operators) are to be logged off automatically after X mins inactivity, and set the time allowed. By default, Automatic log-off is not set.

Alarm Confirmation

Select an option for how active alarms may be confirmed:

- **Unconditional** – User can confirm acknowledged alarms whether alarm is active or not. When confirmed, the alarm will be removed from the Active Alarm list.
- **While input is ON: do not enable– Upon confirmation, u**ser will receive a message that the alarm cannot be confirmed because it is still ON (or because communication failed with the relevant controller)
- **While input is ON: warn user-** User will receive a message warning that the alarm is still ON – clicking on OK will allow the alarm to be confirmed

Multi company

Check this box to display the multi-company fields where appropriate (see Multi Company Module). This option requires that the plug has the Multi Company Module (the letter "M" is included in the plug definition).

Alarm definition for group of input

Enable definition of Input Group Weekly Programmes in the Event Handling Program, and when defining individual Inputs, show if there is an Input Group and Weekly Program associated with the Input in the Input/alarm Status screen.
In case of a conflict, the individual WP is used.
This option should be set when using Input Group Activation/Deactivation Actions ', or when using DDS Terminals

Allow duplicate name of cardholders

This option enables saving cardholders with the same last and first name. In this case, it is necessary to enter a unique number per person in the "Number" field of the *All Cardholders/General* screen.

Special days

Check this box for adding two supplementary daily programs (S1-S2) in the *Weekly Program* definition.
Note: This feature requires that all controllers have supporting firmware dated 01/06/2004 or later.
This option is not implemented on Workstations.

E-mail options button

Opens a window that allows the user to set the email parameters Sender email address, SMTP Server Address, SMTP User Authentication and SMTP Password Authentication information

This information is required when using the 'Send email' Action

Restore Default Values

Resets all Default Values – selecting this button will reset all Options to the system default settings

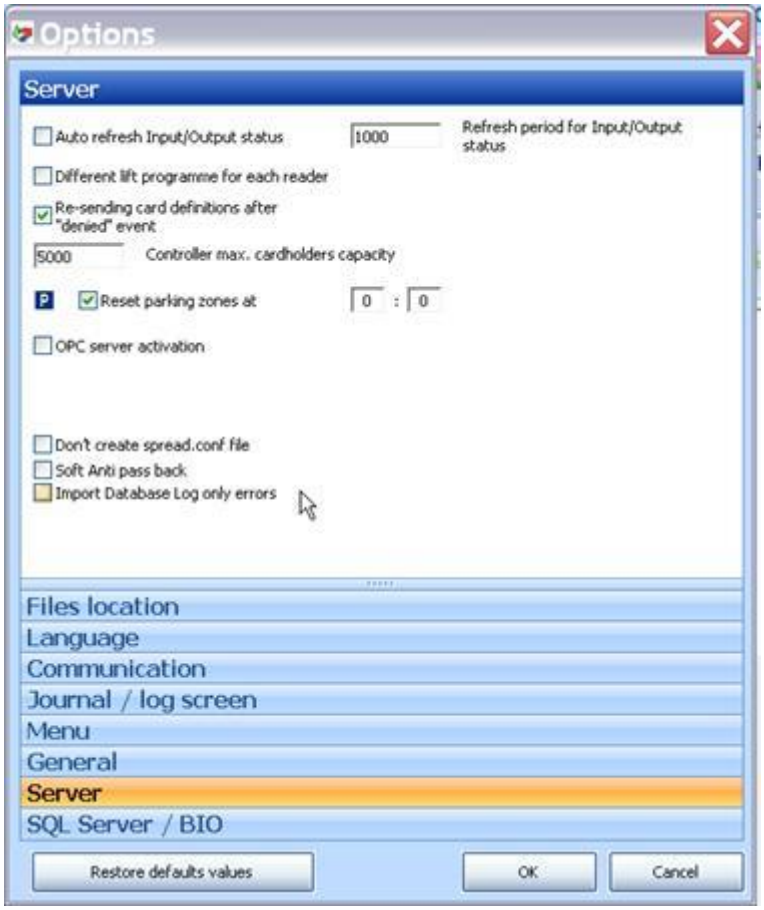
Use with care: Note that ALL options are reset, not only the selected Tab.

OK/Cancel

For all Option tabs, the OK/Cancel button allows the user to activate or cancel any changes made in the settings for that Tab

9.5.2.7 OPTIONS/SERVER

This tab customizes options which are only available from the PC server. This tab will NOT be displayed when running the application runs on a Workstation.



Auto refresh input/Output status

Check this box for the automatic refresh of the I/O physical status in "Active Alarms" screen. This option is not recommended in large installations, as it will slow down communication.

Refresh period for Input/Output status

(1-60 000 ms) Type the refresh delay in milliseconds (1000 ms by default).

Different lift program for each reader

Check the box in order enable the Lift Access Groups (to use a different lift program per reader) (see *Lift Authorization Groups*).
This feature requires the use of EPROM TPL dated 01/03/2003 or later.

Re-sending card definitions after "Denied" event

Check this box for immediate downloading of card information to the controller in case of access denial. This ensures that, if a cardholder presents his badge for a second reading after being denied access, access authorization for the second attempt will be based on up-to-date card information.

Controller max. cardholders capacity

When creating a new badge, a unique identification number is associated with the badge, and this is held in an allocation table in each controller.
Generally, the system can create badges till the maximum capacity limit set in the dongle is reached (defined by the dongle), or to the capacity of the controller/s. However, deleting badges causes gaps in the badge allocation table, and these can slow down the allocation process as the table grows. Setting a maximum capacity here limits risk of this occurring.
The limit set must be lower than the dongle and controller (RAM and ROM) capacities. (5000 by default) (see also ini file setting *MaxCardholders*)

Reset parking zones at HH:mm

Check this box for daily resetting all parking zone counters; each day at the fixed time specified in the time boxes (hh:mm), all parking spaces will be set to 'free'
(see *Parking Module*).

OPC server activation

Check this box to enable the integration of the Application with built-in OPC client applications, in order to control and execute Application commands from a SCADA application. This option requires that the dongle has the OPC Module (the letter "O" is included in the definition). See *OPC Server Module*

Don't create Spread.conf file

Set this option to prevent this file from being created on each startup.
If not set, the Spread configuration file is rebuilt each startup, using the data defined in the *Computer* screen.
It may be necessary to build this file manually.
For advanced users.

Soft Anti-Pass back

Check this box to activate this function (see '*Soft Anti-Passback*').

Note: This feature requires special supporting firmware. Please check with your supplier.

Import Database Log only errors

Check this box to not fill the 'Import.log' file with the detailed information during import process and then conserve space on hard disk. Import errors, if there are some, will be saved on this file (see *Cardholders Import Profile/General*)

It is recommended to use this option if frequent Imports are used, to avoid having excessively large Log files.

Restore Default Values

Resets all Default Values – selecting this button will reset all Options to the system default settings

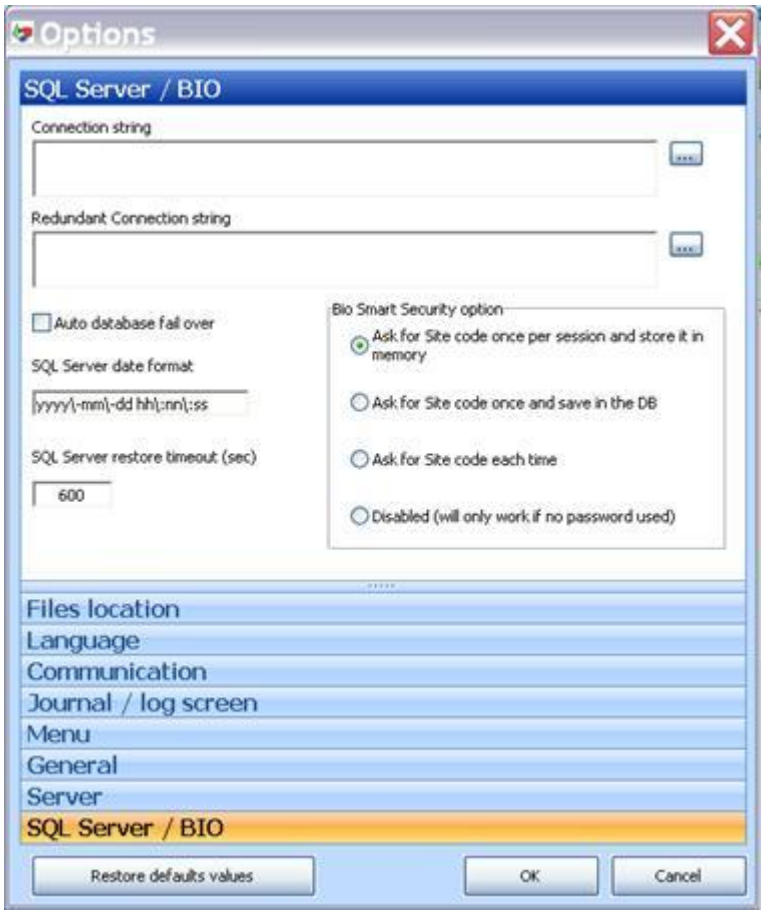
Use with care: Note that ALL options are reset, not only the selected Tab.

OK/Cancel

For all Option tabs, the OK/Cancel button allows the user to activate or cancel any changes made in the settings for that Tab

9.5.2.8 OPTIONS /SQL SERVER / BIO

This tab defines the SQL database parameters when using an MS-SQL format database and/or BioSmart security options.



Connection string

Connection parameters related to the main database. Clicking the […] button allows modifying these parameters. A typical string might be:

```
Provider=SQLOLEDB.1;Password=sql;Persist Security
Info=True;User ID=sa;Initial Catalog=5;Data Source=SERVER2
```

Redundant Connection string

Enter the connection parameters related to a secondary database, if needed. Clicking the […] button allows accessing these parameters directly.

Auto database fail over

Select this box when it is needed to automatically switch to the backup database in case of main database failure and vice versa.

SQL Server date format

Modify the date format as defined in MS-SQL Server application, if needed.

SQL Server restore timeout (s)

Indicate the maximum required time of a database restoration, if needed. After the end of this time, if the restoration is not done the application will stop the restore operation.
(1-60 000 sec) (default 600 sec)

Bio Smart Security option (ignore if no BioSmart readers installed)

Chose a suitable security level for the BioSmart site code:

- Ask for Site code once per session and store it in memory (default)
- Ask for Site code once and save it in the DB
- Ask for Site code each time BioSmart is used
- Disabled (will only work if no password used)

Restore Default Values

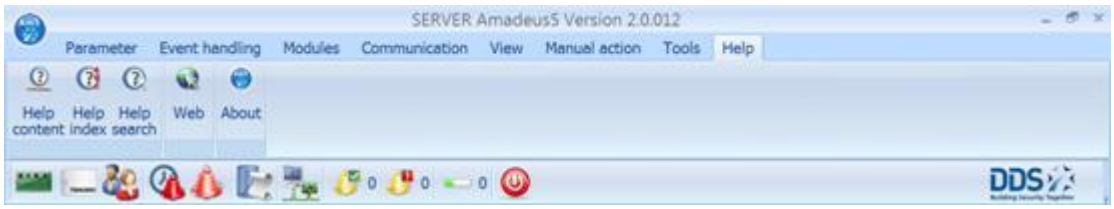
Resets all Default Values – selecting this button will reset all Options to the system default settings

Use with care: Note that ALL options are reset, not only the selected Tab.

OK/Cancel

For all Option tabs, the OK/Cancel button allows the user to activate or cancel any changes made in the settings for that Tab

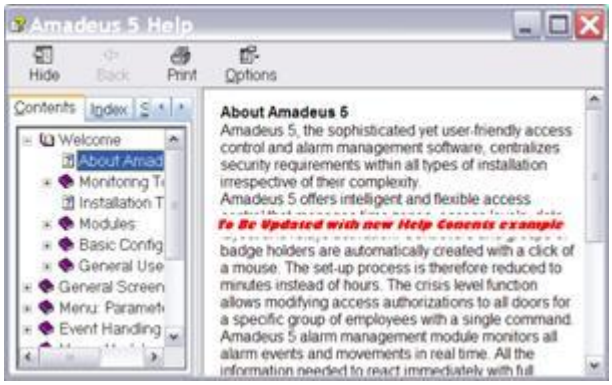
10 HELP TAB



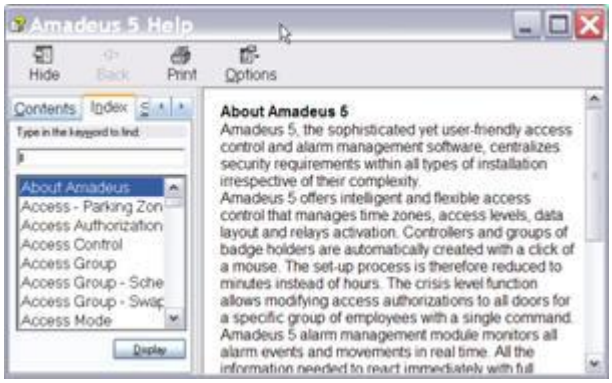
There are 2 groups of Operator actions in the Tools Tab:

Help Functions	Info
Help Content	Web
Help Index	About
Help Search	

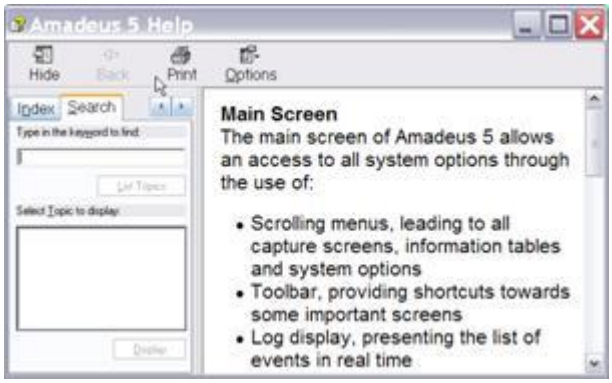
10.1 HELP CONTENTS


Amadeus 5 Help
Hide
Back
Print
Options
Contents
Index
About Amadeus 5
Amadeus 5, the sophisticated yet user-friendly access control and alarm management software, centralizes security requirements within all types of installation irrespective of their complexity.
Amadeus 5 offers intelligent and flexible access
badge holders are automatically created with a click of a mouse. The set-up process is therefore reduced to minutes instead of hours. The crisis level function allows modifying access authorizations to all doors for a specific group of employees with a single command.
Amadeus 5 alarm management module monitors all alarm events and movements in real time. All the

10.2 HELP INDEX


Amadeus 5 Help
Hide
Back
Print
Options
Contents
Index
About Amadeus 5
Amadeus 5, the sophisticated yet user-friendly access control and alarm management software, centralizes security requirements within all types of installation irrespective of their complexity.
Amadeus 5 offers intelligent and flexible access control that manages time zones, access levels, data layout and relays activation. Controllers and groups of badge holders are automatically created with a click of a mouse. The set-up process is therefore reduced to minutes instead of hours. The crisis level function allows modifying access authorizations to all doors for a specific group of employees with a single command.
Amadeus 5 alarm management module monitors all alarm events and movements in real time. All the
About Amadeus
Access - Parking Zon
Access Authorization
Access Control
Access Group
Access Group - Sche
Access Group - Swap
Access Mode
Display

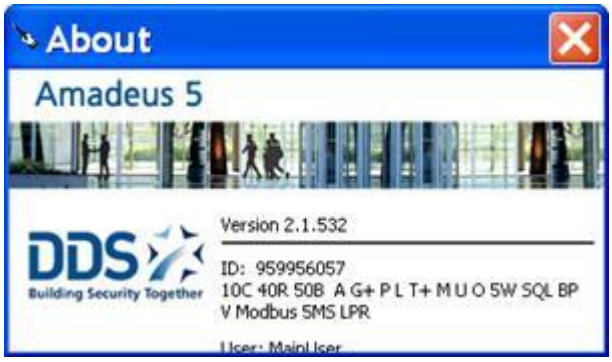
10.3 HELP SEARCH


Amadeus 5 Help
Hide
Back
Print
Options
Index
Search
Main Screen
The main screen of Amadeus 5 allows an access to all system options through the use of:
• Scrolling menus, leading to all capture screens, information tables and system options
• Toolbar, providing shortcuts towards some important screens
• Log display, presenting the list of events in real time

10.4 WEB

10.5 ABOUT

On startup, the 'About ' window is displayed – this presents the operating parameters set by the DDS dongle (plug).



The following parameters are shown:

Identification

The system license number (stored in the Dongle) is displayed.
In a Demo system, the word DEMO is substituted

Configuration Limits

nC Maximum No. ('n') of Controllers allowed
nR Maximum No. ('n') of Readers allowed
nB Maximum No. ('n') of Cardholders allowed
nW Maximum No. ('n') of Workstations allowed
(not shown in Demo mode)
LIGHT Pre-configured Light version

Modules Supported

A Alarm Module
G Basic Graphics Module
P Parking Module
L Lift Module
T Basic Time and Attendance Module
U Guard Patrol
M Multi Company
O OPC Server
SQL SGL Server
BP Badge Printing Module
V Video Module
Modbus Modbus TCP
MSn Multi-site ('n'=number of sites)
G+ New Graphics + Module
T + Time and Attendance + Module
LPR License Plate Recognition Module

10.6 HELP SOURCE FILE

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11 MULTI-COMPANY, MULTI-SITE OPERATION

In this section:

- *Multi-Company Option*
- *Multi-Site Operation*
- *Setting up a Multi-Site System*

11.1 MULTI-COMPANY OPTION

The Multi-company option provides limited capabilities allowing a site to be divided so that access control is applied to separate groups of cardholders and separate access control hardware, while still providing some shared facilities, so that two or more companies can share premises, with each applying their own controls and rules.

Note: The Multi-company option can only work with an .mdb database.

There is no 'super-user' capability other than the initial setup of additional companies, and for defining new operators in order to allocate them their unique system login.

Each operator logs on using a particular company ID and password, and can use the full facilities of the system for all cardholders and system facilities that are defined for that company.

For more comprehensive facilities, including the ability to define 'shared' and 'global' entities, and to use the more advanced capabilities of a site based on an SQL database, the Multi-Site option should be used.

11.1.1 DEFINING A MULTI-COMPANY INSTALLATION

ENABLE THE OPTION

Check that the following entries exist in the .ini file:

```
DBType = 1
Multi-site = 0
```

The dongle must contain the entry 'M'.

In the *Tools/Options/General* screen, check the entry 'Multi company', and click OK. This changes the Multi company option in the .ini file to:

```
Multi Company = 1
```

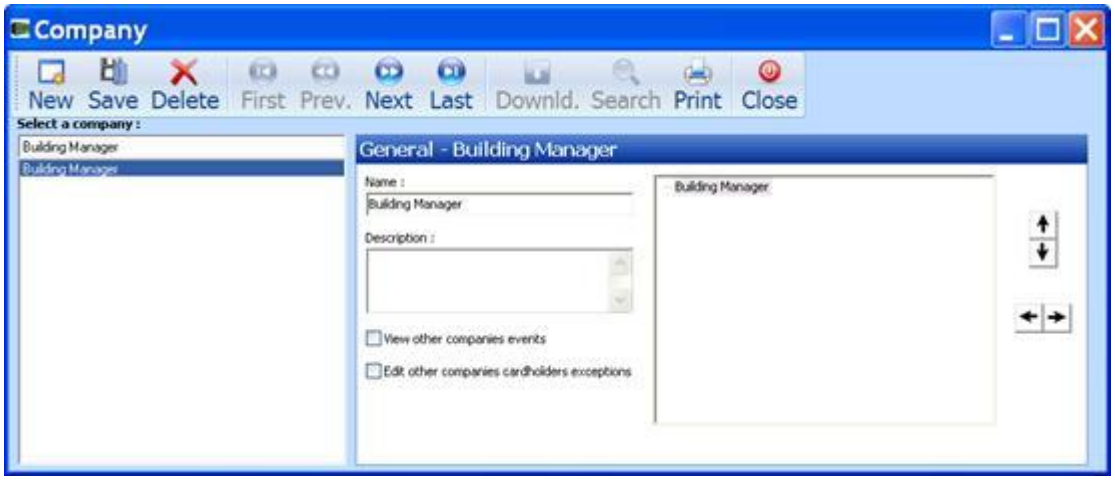
The system will immediately show the default login particulars in the top RH corner of the screen – 'host' company name (default 'Building Manager') and the username of the operator in parenthesis).

The login particulars are shown in all screens once the option is enabled. Most screens will also show a 'Company' dropdown, which will normally be disabled (greyed out), but will indicate the 'current' company – i.e. the company for which the current user is logged in. The dropdown will only be active for those screens where new definitions might be shared (e.g. Computer, Controller Network, Readers, Daily Programme, Weekly Programme)

11.1.2 COMPANY (MULTI COMPANY OPTION)

Use this screen to name your Company and to define additional Companies

Note on accessing this screen: Depending on the screen width, the RH group of icons of the menu ribbon
(Company, Authorization Level, User, Customized labels and Customized fields) may not appear as they are minimized. In that case, a pull-down arrow button (▼) is shown. In order to display the extended menus and access the icon, you may need to click the pull-down arrow.



Name

The name 'Building Manager' is the default for the company defining the system. The name can be edited, but not deleted.
The name in the Name field is also immediately shown in the RH window.

Description

Free text

View other company events

Check this box if the log viewed by workstations in this company must also show events from the other company (/companies)

Edit other companies cardholders exceptions

Check this box to allow users belonging to this company to view (read only) all cardholders of all companies, and to allow update rights in the Cardholder/Exception screen.

Adding a Company

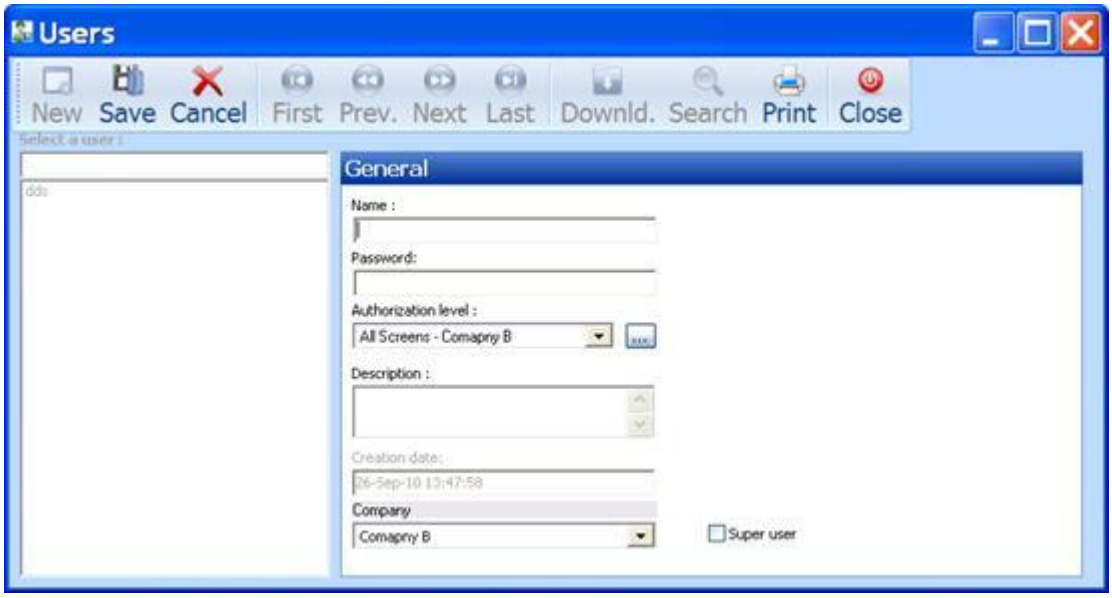
Click **New**
Enter the name and description of the next company.
Check the 'Other company' options as required for the new company
Click **Save**
(A message will display 'Changes will only take effect after logging off.)

RH Window

Use the arrow keys to order the companies to indicate relationships. This is for information only, no System function.

11.1.3 USERS (MULTI COMPANY OPTION)

When using the Multi company option, the User screen provides additional facilities for defining additional limited-function 'super users' (i.e. users with the ability to define their own users – but in the Multi company option, even 'super users' can only access the data of cardholders and system facilities defined for their own company).



Using the Multi company option, the User screen opens by default showing the first user (alphabetically). The first time the screen is opened, there will be no users defined for the second or subsequent companies.

Select **New** to define a new user.

The Authorization Field dropdown will immediately show 'All screens - <Company B>", and the Company dropdown will show '<Company B>'. The Super User block will be unselected.

Additional users can now be defined, by selecting the appropriate entry in the Company box. The Authorization Field will always precede any entry with the Company that has been selected, as each user can only be defined for one company.

If the 'Super user' box is selected, then that user will, in turn, be able to define additional users.

11.1.4 LOGGING ON IN A MULTI-COMPANY SITE

Using the Multi-company option, the Company tab is shown in the Menu Bar, and each Operator logs into the system with a company-specific ID and Username. This is shown below.

11.1.5 DEFINING SHARED FACILITIES USING THE MULTI COMPANY OPTION

Computer

Additional computers may be defined to be used as Workstations, provided there is an appropriate WS entry in the dongle. Each workstation may be unique to a company or may be shared, in which case the information accessible on that workstation will depend on the company to which the logged-on user belongs.

Controller Network

A Computer Networks may be defined as Shared so that other companies can use this Network for their controllers.
(Controller address must be unique on the network)

Reader

Readers can be shared so that other companies can include them in their Access Groups. (example – a reader at a main entrance might belong to Co A and be used by cardholders of Co B)

Daily/Weekly Programme

Daily and Weekly Programmes may be defined as shared s that all companies can use them. (Not all programmes need to be shared.)

11.2 MULTI-SITE OPERATION

The Multi Site module supports the access control needs of multi location organizations. It allows individual control of each location ('Site'), while maintaining the ability to provide centralized management. Depending on user requirements, Multi-site support can be configured with three levels of database connection:

- fully redundant architecture with replicated databases
- centralized database with decentralized backup of local database information
- single centralized database, supporting local workstations but with transactions controlled only at local hardware level in the event problems connecting to the database server

GLOSSARY of terms used regarding the Multi-site Module

Access Control Server (ACS): The machine that runs the access control application that is in charge of communicating directly with the controllers. When this access control application or the computer is down, it is not possible to communicate with the controllers. Each ACS may support several workstations.

Workstation (WS): Another PC, usually on the same LAN with the ACS that can access the database and fully operate its records (add/modify cards and cardholders, change controller definitions, etc.). The tasks that require communication with controllers are sent in the background to the ACS and the ACS updates the controllers accordingly. The WS is totally dependent upon the ACS and cannot start unless the ACS is already up.
If the ACS goes down, all its WS automatically go down as well.

DB Server: The machine where the SQL database is located. Each machine, ACS or WS, must have connection to the DB server. Note that the Multi Site Module is supported only with MS-SQL.

11.2.1 MULTI-SITE GENERAL CONCEPTS

USERS

Each user can view and control one or more sites according to his defined authorization. He/she may control the corresponding sites regardless of the physical ACS that was used to log on. The authorization of which sites can be viewed/controlled is defined in User screen and it is checked upon login according the user name used to log into the application. It is done against the DB regardless of the physical computer.

For example, a user belongs to site A (i.e., created by site A) may log on to the access control application from physical ACS of site B and control, according to his defined authorization, sites C & D.

It is recommended that each site would have at least 1 user that can control it. It is also recommended to define 'powerful' users that can control ALL sites.

For example, an organization of 3 sites should have at least 4 users:

User	Belongs to site	Has control at Site(s)
User A	Site A	Site A
User B	Site B	Site B
User C	Site C	Site C
User D	Site A (or any other)	Site A + Site B + Site C

CARDHOLDERS

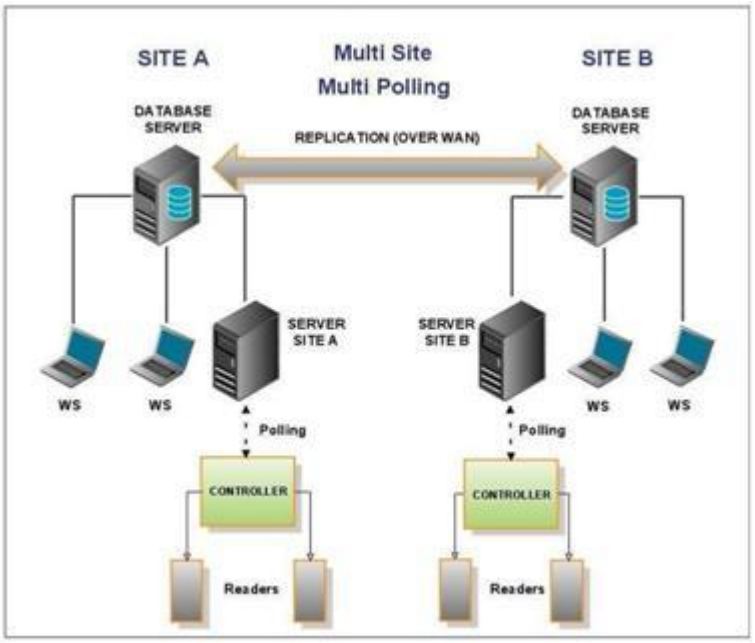
In Multi Site installation we distinguish between 3 types of cardholders:
Local, Shared & Global.

- **Local** – Allowed access only at doors of the one site at which the cardholder is registered.
- **Shared** – In addition to doors of the site where the cardholder is registered, , other sites may allow this cardholder to pass at their doors. The details of the shared cardholder are viewed at other sites as 'read only', but with the possibility to add their own Access Groups to this cardholder. Exceptions are also enabled.
- **Global** – The cardholder can be managed and modified (including deletion) by users at any site.

11.2.2 MULTI-SITE ARCHITECTURE

Depending on the specific client requirements, the Multi Site module can be installed in different architectures.

11.2.2.1 MULTI-SITE / MULTI-POLLING (WITH DB REPLICATION)



In this architecture, each site has at least one local Access Control System (ACS) communicating with its local controllers. Each site uses a local copy of the database The local DB is constantly replicated with the remote DB using MS-SQL replication tools. The recommended method is 'Merge Replication' so that each change to the DB is almost immediately copied to the remote DB.

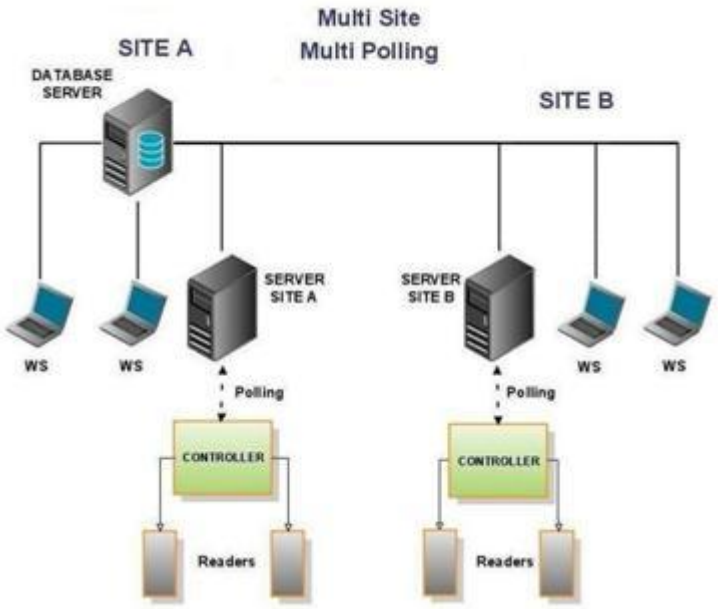
Each site may have optional workstations connected to the local DB.

This configuration allows each site to be fully operational during network problems when connection between sites is down.

This architecture is suitable when the LAN/WAN between the sites is not 100% reliable and the end user wants to ensure work continuity during all times.

> Caution. This mode is extremely powerful and offers great benefits to the user. However, care must be taken as the replication part requires a high level of SQL knowledge, both in setup as well as to maintain and troubleshoot.

11.2.2.2 MULTI-SITE / MULTI-POLLING (WITHOUT DB REPLICATION)

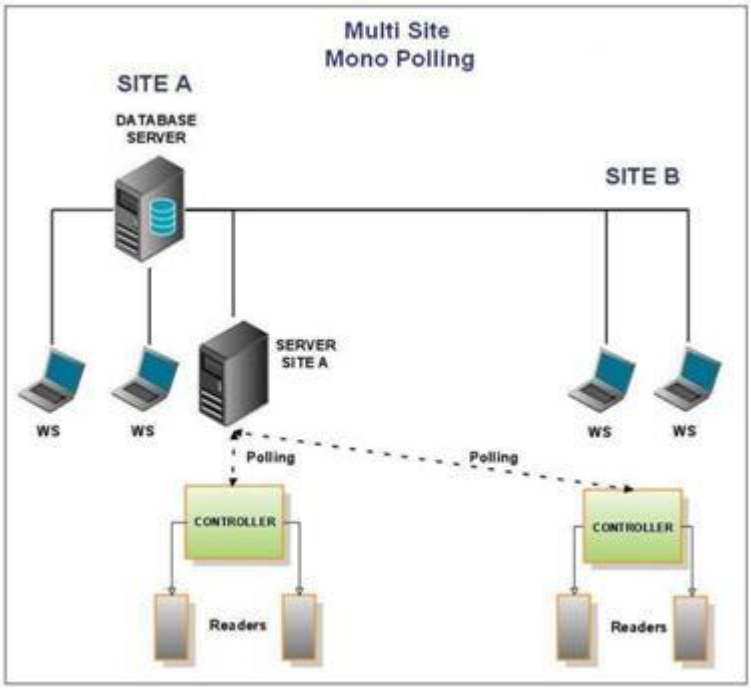


This is the same as the previous configuration, but uses a single database.

In this configuration all computers, ACS and WS alike, are naturally totally dependent on the connection to the DB server. Still, each site is independent in the sense that it can function regardless of whether the other ACS's are up or down. Each local ACS only needs its connection to the DB.

This architecture is suitable when the network is highly reliable (although nothing is perfect in this life..). In these cases this configuration is the better choice because there is no reason to implement DB replication (with all its complexity) when network problems are scarce.

11.2.2.3 MULTI-SITE / MONO-POLLING



In this architecture, there is only one ACS which polls the controllers of all the sites and manages all the events. Similarly, there is only one DB server on a single site, to which all sites must have access at the same time. The database must be accessible from any WS. Each site is managed from WS.

Obviously this architecture requires a highly reliable network and also the constant operation of the ACS. When this single ACS is down (even if the network is still good) the communication to all controllers (of all sites) is stopped and no WS can operate.

In case of network failure between sites, the remote WS cannot access the database.

Note: This architecture might look exactly like the Multi Company architecture, but the difference is that it allows a simultaneous management of more than one site from the same screen without the need (as applies using the Multi Company option) to log off & login as a different user.

FUNCTIONS

Communication with controllers

When Multi Polling is used, each ACS communicates with its local controllers. When a local user creates cardholders that should access remote sites – it cannot send them directly to the remote controllers. Therefore the local ACS writes the corresponding commands into a specific table of the database called QueueMSG. Then, each ACS polls this table once every 60 seconds (by default) in order to see whether there are any tasks waiting for it – if yes, it sends the corresponding data to the relevant controllers and then cleans the related records from QueueMSG table. Together with the replication delay, this process may take 1-2 minutes from the moment the definitions were saved till the changes are updated on the controllers. In cases when the relevant ACS is down, its controllers are not updated till about 1 minutes after it is started.

The frequency of checking the QueueMSG table is set by the INI option:

CheckQueueMSGEvery

Tip: For testing and/or troubleshooting QueueMSG activity can be recorded in the daily AME file. To turn on this recording set the following INI options on both servers:

DebugMSMQSend = 1

DebugMSMQRecv = 1

When Multi Polling is not used, there is only one ACS, QueueMSG is not used, hence all connected controllers are updated without any delay.

In any case, regardless of single or multi polling, all the real time events are shown immediately because they pass through the Spread communication and not through the DB. Each PC shows the events according to the logged-in user and the sites he/she is authorized to view & control.

11.3 SETTING UP A MULTI-SITE SYSTEM

Technical requirements for a Multi-site System

Access Control System

- Solo Intel Xeon or AMD Opteron
- Min 2 GB of fast RAM (DDR II with 667 MHz)
- Chassis in Rack or Tour
- Fans, power supply and redundant and replaceable hard disks for a maximum availability
- USB port for the protection key (inside the PC recommended)
- OS: Windows XP/Pro, 2003 Server (recommended), Vista
- License: Access Control application with dongle having Multi Site & SQL modules

Work Station/s

- OS: Windows XP (SP2 is better), Vista or Windows 2000.
- Microsoft SQL Server Native Client
- Access Control application
- WS can be linked to one ACS only
- Several WS can be linked to the same ACS.
- Before WS starts, its respective ACS should be up and running

DB server (for database management in distributed environment)

- Solo or Dual-Core Intel Xeon or Dual-Core AMD Opteron processors
- Min 3 GB of fast RAM (DDR II with 667 MHz)
- Chassis in Rack or Tower
- Fans, power supply and redundant and replaceable hard disks for a maximum availability
- Adequate storage capacity
- OS: Windows 2003 Server (recommended), Windows XP/Pro, Vista
- SQL Server 2005: if the database is replicated between the sites, a license allowing replication is needed. It is also necessary to install a MERGE type replication between the SQL Server 2005 databases of the different sites relating only to the tables (and not on Stored procedures or Views which are brought to be updated by the new versions). The replication in SQL 2005 has been improved, so it is better to use the 2005 version of SQL server.

Network

- Each site should have a Local Area Network (LAN)
- All PC network boards should be configured in Full Duplex

- Each site should have access to the Network and all PC must have connection to the DB server
- The bandwidth between the sites depends on the sites size, the number of updates and the number of daily transactions on each site. It would probably need a minimum of 1MB point-to-point between the sites.
- All the PC from all sites should be able to communicate with each other directly by UDP messages to allow communication by the Spread tool. The Spread uses default ports 4803 and 4804 (to allow in the Firewall).
- Install a method for measuring service quality QoS, which consists in dividing, said digital link into a plurality of sections linking up at least two demarcation points. It allows to save sections of little size when the network is highly busy. QoS is not applied by internet providers, so it is better to use PTP links.
- Check that there is no packet loss (because a part of the communication is in UDP)
- The latency should be < 250ms. Check it with the Ping command from one PC to each other.
- Check that there is a re-routing of each PC to each other PC.
- As the network quality depends on the site, we recommend checking with a Network specialist if the collisions number is satisfactory and if the network complies with all above requirements.

Configuring a Multi-site system

Ini file

On each PC (ACS or WS) set the INI file with:

Multi-site = 1

Each PC (ACS or WS) should set the .ini entry *DbsFolder* with the corresponding ACS application folder. (See also the 'Shared folders' section later on this document)
Each WS should set the name (in capitals) of its respective ACS at the myServerName entry in its .ini file. For instance:

myServerName = MAINCOMPUTER

Dongle

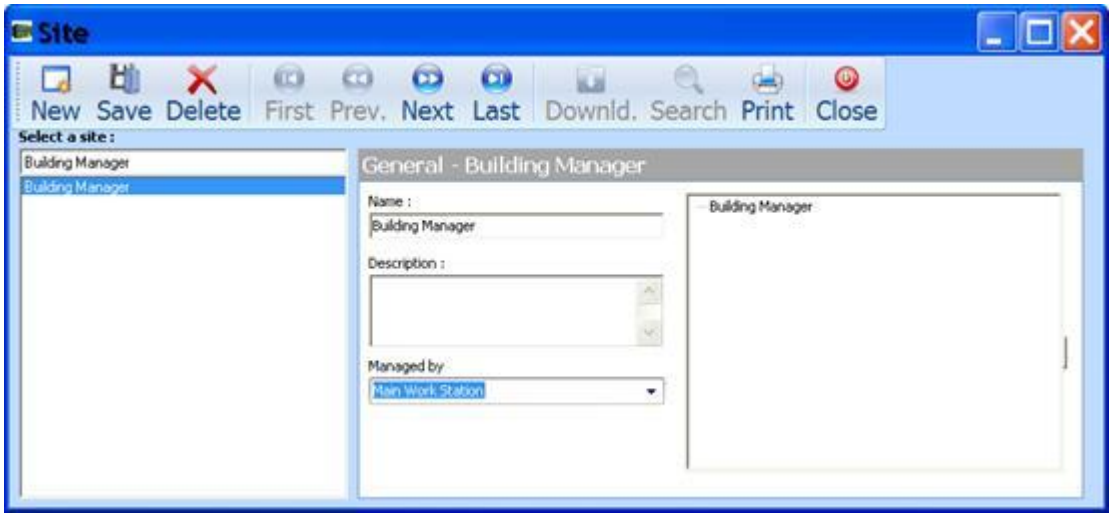
Each ACS should have a dongle with Multi Site (MS) & SQL (SQL) modules. The number of sites that can be managed by that ACS should also be specified on the dongle. For example, ACS PC that can manage 3 sites should have a dongle with '3MS'.

Detailed Technical information about Setup, capacity, etc is given in the DDS document '10TE510 Multi-site Module'

11.3.1 SITE SCREEN

Site screen: The Site screen in the Parameter Menu is only shown when the Dongle contains the Multi-site option and the .ini file includes the entry:

Multi-site = 1



The Site screen will always contain master record with the default name 'Building Manager', managed by the 'Main Work Station'. This record can be edited but cannot be deleted.

To build a Multi-site installation, perform the following steps:

1. Change the name of the Main Site and Save
2. Add another Site, with a suitable name.
3. Set **Managed By** to **Main Work Station** (this can be changed later)
4. Open the **User** screen
5. Change the name of the Main Site and Save

12 TIME AND ATTENDANCE VARIATIONS

There are three (independent) variations of the Time and Attendance Module:

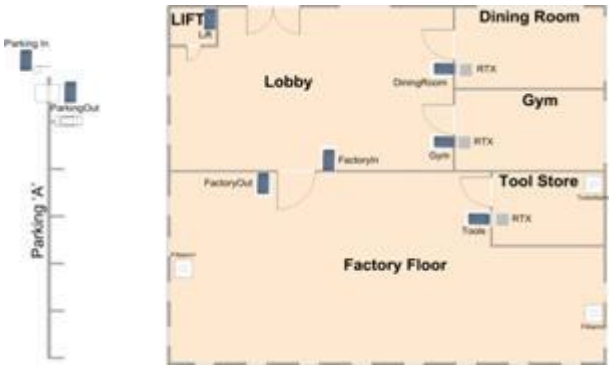
- **Standard T&A – Option 1** : 'Time on site'
  The system scans each cardholder's transactions, selects the first and last valid transactions of the day, and calculates the time between them.
- **Standard T&A – Option 2** : 'Working Time'
  The system records 'working time' using readers designated as 'Entrance Reader' (i.e. ON) and 'Exit Reader' (i.e. OFF).
- **T+ Module**: Enhanced T&A
  T+ gives detailed recording of all time on site, reporting work as regular working time or in user-defined categories (Training, Project-related, etc). Time is also reported against configured shift patterns for calculation of overtime and short time.
- The **T+ T&A File Export utility** allows exporting the T&A data gathered by the main application into simple text files, one text line/record per event. This is a simple method for integrating the main access control application with external Time & Attendance (T&A) systems.

All these variations include flexible reporting capabilities and allow exporting of the data in programmable file formats for processing by external systems.

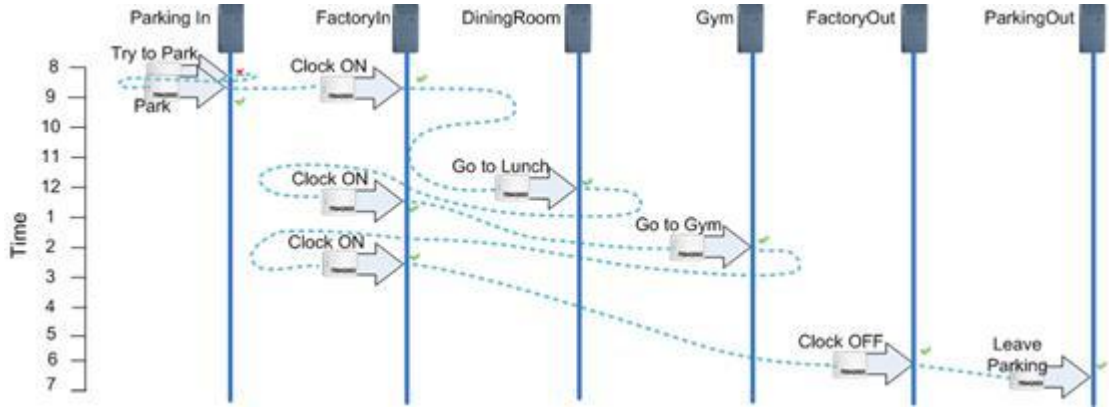
> Note that the Standard T&A Options 1 & 2 are available in the standard programme. The T+ module requires extended T&A licensing while the T&A File Export facility uses an external utility ('TA.EXE')."

12.1 T&A EXAMPLE

To illustrate the T&A options, consider the site diagram below as an example:



A typical clocking pattern might have an employee arrive too early at the parking entrance (i.e. at a time restricted by the Access Control rules set in the Daily Programme), and then clock again at the Parking reader once access is permitted. Then he would go through the lobby and clock ON at the door to the factory floor. Later that day, the employee would eat at the dining room, take a break in the gym, and then clock out and go back to the parking area to leave the site.



Actual clocking (taken from a log) would look like this:

25/01/10 08:15:00 Access Denied 'Smith Jack ' From reader 'Parking IN' - Not Authorized at this time
25/01/10 08:30:00 Access Granted 'Smith Jack ' From reader 'Parking IN'
25/01/10 08:30:26 Access Granted 'Smith Jack ' From reader 'Factory IN'
25/01/10 13:00:29 Access Granted 'Smith Jack ' From reader 'Dining Room'
25/01/10 13:30:06 Access Granted 'Smith Jack ' From reader 'Factory IN'
25/01/10 15:01:18 Access Granted 'Smith Jack ' From reader 'Gym'
25/01/10 15:30:36 Access Granted 'Smith Jack ' From reader 'Factory IN'
25/01/10 19:00:09 Access Granted 'Smith Jack ' From reader 'Factory OUT'
25/01/10 19:05:00 Access Granted 'Smith Jack ' From reader 'Parking OUT'

See *Setting up a T&A + Scenario*

The following three sections show how the above transactions would be reported by the 'Standard T&A' Options 1 and 2, and by 'T+' module.

12.1.2 'STANDARD T&A' OPTION

The system scans each cardholder's transactions, selects the first and last valid transactions of the day, and calculates the time between them.

12.1.2.1 'STANDARD T&A' OPTION 1 - SETUP

No specific setup of readers or other parameters is required for Option 1 – the T&A report will be produced solely on the basis of the first and last valid transaction of the day, i.e. reporting time on site only.

12.1.2.2 'STANDARD T&A' OPTION 1 - REPORT

To issue a report, go the tool bar item 'Modules' and select 'Time attendance'. The *Time Attendance screen* appears, and must be completed in order to produce a report.

Note: The checkbox 'Check entry/exit readers only' must not be checked when requesting an 'Option 1' T&A Report.

Example: Hereunder the report issued based on the previous *T&A example* :

Time & Attendance

Department <All Departments>

From 25/01/2010 00:00 To 25/01/2010 23:59

Smith Jack

Entry Date	First pass	Last pass	Day total hours
25/01/2010	08:30	19:05	10:35
		Total hours	**10:35**

Explanation:

1. For each cardholder, one line is produced per day, showing only the first and last valid transactions.
2. The first logged transaction (08:15) is disregarded as it was invalid
   (In the example, the Daily Programme allows access here from 08:30).
3. Time is calculated from first valid clocking (08:30) to last valid clocking (19:05)

12.1.2.3 'STANDARD T&A' OPTION 1 – SUMMARY

Standard T&A Option 1	Description
Setup	No specific setup for readers or cardholders. Valid transactions from all readers are used.
Detail level	Selects First Pass, Last Pass. Total Hours = (Time of last pass – time of first pass)
Reporting	Report of transactions for: <from date and time> <to date and time>, <All or selected readers>, <All or selected departments>, <All or selected cardholders> Basic editing of report format is supported, and report can be exported in various file formats (RTF, PDF, HTML, XLS, TIF and TXT)

12.1.3 'STANDARD T&A' OPTION

The system records 'working time' using readers designated as 'Entrance Reader' (i.e. ON) and 'Exit Reader' (i.e. OFF). Transactions at readers defined as '<none>' or 'Entrance Reader\Exit Reader' do not affect T&A clocking and simply apply their access control functions. These reader definitions are set in the *Reader General Tab* screen.
Option 2 also adds the ability to input transactions into the T&A report manually.

12.1.3.1 'STANDARD T&A' OPTION 2 - SETUP

The only setup to perform is to define which readers are used as 'Entrance Reader' from which working time calculation will start and 'Exit Reader' from which working time calculation will stop.

Example:
Based on the previous *T&A example* , the following setup is required in the *Readers/General* screen in order to use Option 2 of the Standard T&A module to produce a working time report.

Reader Name	T&A Field	Notes
Parking IN	<none>	
Parking OUT	<none>	
Factory IN	Entrance Reader	Starts accumulation of working time
Factory OUT	Exit Reader	Ends accumulation of working time
Dining Room	<none>	In the example, time in the Dining Room is regarded as working time. By defining this reader 's T&A function as <none>, the T&A calculation is not affected by clocking here. Working time will still be accumulated for the cardholder

Reader Name	T&A Field	Notes
Gym	Exit Reader	In this example, time at the Gym is not working time. By defining the Gym reader as an 'Exit Reader', a clocking here stops the accumulation of working time until the next ON clocking at a reader defined as an 'Entrance Reader'

12.1.3.2 STANDARD T&A OPTION 2 – REPORT

To issue a report, go the tool bar item 'Modules' and select 'Time attendance'. The *Time Attendance screen* appears and must be completed in order to produce a report.

Note: The checkbox 'Check entry/exit readers only' must be checked when requesting an 'Option 2' T&A Report.

Example: Hereunder the report issued based on the previous *T&A example* :

Time & Attendance

Department <All Departments>

From 25/01/2010 00:00 To 25/01/2010 23:59

Smith Jack

Entry Date	Entry Time	Exit Time	Day total hours
25/01/2010	08:30	15:01	06:31
25/01/2010	15:30	19:00	03:30
		Total hours	**10:01**

Explanation:

1. For each cardholder, one line is produced for each logical pair of clocking transactions, only at readers defined as 'Entrance Reader' and 'Exit Reader'.
2. In the example, the first T&A clocking (at an 'Entrance Reader') is at the Factory Entrance at 08:30.
3. The Gym Reader is defined as an 'Exit Reader', so that clocking at the Gym stops the accumulation of working time (15:01).
4. Working time resumes when the cardholder clocks at the Factory Entrance (15:30) and continues until there is a clocking OFF transaction at the Factory Exit (19:00)

12.1.3.3 'STANDARD T&A' OPTION 2 – SUMMARY

Standard T&A Option 2	Description
Setup	The required readers must be designated as 'Entrance Reader' and 'Exit Reader' in the *Readers General Tab* screen. Note: The standard T&A system only takes transactions from readers with these definitions. The default transaction code set in the *Readers/Miscellaneous/Badge Format Tab* screen is not used for T&A definition.

Standard T&A Option 2	Description
Detail level	In the *Time and Attendance (Basic and Standard Options)* screen, the 'Check entry/exit readers only' option must be selected. Transactions from readers defined as 'Entrance Reader' and 'Exit Reader' are grouped into pairs. Total Hours = Sum of all pairs at designated readers. No calculation of overtime or short time. No accumulation of non-working times. Note: If the 'Check entry/exit readers only' option is NOT selected, then time will be reported as described in Option 1 above.
Reporting	Same selections available as for Option 1.
Editing missing transactions (marked ??? in the report preview)	Manual transactions may be entered to complete unbalanced pairs (clock ON and OFF transactions). No new pairs can be introduced. Manually entered transactions are marked with *, and can be edited. Real transactions resulting from card transactions cannot be edited. If actions are edited then the operator must exit and re-enter the report screen to force re-calculation.

12.1.4 'T+' MODULE

The 'T+' module allows:

- Calculation of the total hours worked according to readers selected
- Definition of Personal Contracts, i.e. shift patterns for calculation of regular working time, overtime and short time.
- Fixed or flexible working hours
- Calculation of the time accumulated on a specific job (in user-defined categories like Maintenance, training, Project-related, etc.) or location (meeting room, parking, library, etc.).
- Exporting the report in an external file in different formats (text, Excel, etc..)

12.1.4.1 'T+'MODULE - SETUP

The following setup is required in order to use the 'T+' module.

System Parameters

1. The 'T+' authorization code must be present in the system dongle
2. The system's .ini file must contain the entry

   [Time and Attendance]

   TA+ = 1

Defining General Working Time and different Categories of Working Time

1. Transaction

The 'T+' module will normally accumulates working time into a general working-time total:

- The working time begins from any transaction having a transaction code = 0, from a reader defined as an 'Entrance Reader/Exit Reader'.
- The working time ends from any transaction having a transaction code = 1, from a reader defined as an 'Entrance Reader/Exit Reader'.

These two transactions exist by default, are named 'Entrance' and 'Exit' and cannot be changed (except for their name which can be edited, see screen *Transactions*.

When a cardholder is granted access at a specific reader, the code associated to the transaction is one of the two following:

- Either the default transaction code of the reader used (defined in the *Reader/Miscellaneous/Badge Format* screen)

- Or the code typed-in by the cardholder at the reader keypad, which overwrites the reader's default transaction code.

2. Transaction Categories

In addition, the user can define 'Transaction Categories' that allow time passed in pre-defined categories to be reported on separate counters. These categories may be from two types: 'Working time' (i.e. paid) category for which the time accumulated in this category is added to the general working-time counter and 'non-working' (i.e. unpaid) for which time accumulated is not added to the general counter.
To do this, the user defines the Transaction Categories, (*Transaction categories screen*) choosing whether they are 'working time' or 'non-working time', and then associating Transaction Codes to the specific categories that will signal that a particular clocking is the start of time recording for that category. (screen *Transactions*).

Typical transaction Categories might be:
Work time: Training, Job clocking
Non-working time: Use of company recreation facilities (Gym, library)

The total number of hours accumulated in 'Working time' category will appear in the report, under the category name and will also be included in the 'total hours' counter.

The total number of hours passed in 'Non-Working time' category will appear in the report, under the category name but will not be included in the 'total hours 'counter.

For the T+ module, only readers that are defined as 'Entrance Reader\Exit Readers' will record T&A transactions.

The transaction code, which associates the transaction to its category, is associated with a cardholder transaction in two different ways:

- Either it is the default transaction code of the reader used (defined in the *Reader/Miscellaneous/Badge Format* screen)

- Or it is the code typed-in by the user at the reader keypad, which overwrite the reader default transaction code.

Example: In the previous *T&A example*, the transactions categories will be set as follows:

Name	Category Type	Notes
Gym	Non-Working time	The total number of hours passed in this category will appear in the report, under the 'GYM' category but WILL NOT be included in the 'total hours 'counter.
Meals	Working time	The total number of hours passed in this category will appear in the report, under the 'MEALS' category and will also be included in the 'total hours 'counter.

3. Readers

Each Reader that is to be used for reporting T&A transactions must be designated as 'Entrance Reader/Exit Reader' in the *Reader/General* screen.

For each of these readers, Default Transaction Codes (which are attributed to a transaction at this reader) must be set in the *Reader/Miscellaneous/Badge Format* screen.
For the recommended convention for Transaction Codes see the *Table of Transaction Codes*

Example: In the previous *T&A example* , readers will be set as follows:

Name	T&A Function	Trans Code	Notes
Parking IN	<none>	n/a	
Parking OUT	<none>	n/a	
Factory IN	Entrance Reader /Exit Reader	0	'0' is the default transaction code for 'ON' clocking as 'normal time'
Factory OUT	Entrance Reader /Exit Reader	1	'1' is the default transaction code for 'OFF' clocking as 'normal time'
Dining Room	Entrance Reader /Exit Reader	40	In this example, the 'Meals' category is set as working time ('paid').
Gym	Entrance Reader /Exit Reader	50	In this example, the 'Gym' category is set as non-working time ('unpaid').

Defining Working Time

1. Department

To get a Time and Attendance report, a cardholder must belong to a department to which a personal contract will be attributed. The cardholder therefore gets the Personal Contract of this department. His report will show the regular, possible supplementary or missing hours according to his personal contract.

Therefore, a department must be defined (via the *'Department'* screen) and then, it must be attributed to a cardholder through the *'Cardholder/General'* tab screen.

If a cardholder doesn't have a department, or a department is not assigned to a personal contract, his report will include all the calculated time according to his entrance and exit transactions, without supplementary or missing hours.

2. Daily Shift (Screen shown in *Daily Shift*)

Daily Shifts set out the basis on which working time will be allocated as normal and overtime. Two default shifts, 'All Working' and 'Non-Working,' are pre-defined.

3. Personal Contract (Screen shown in T&A Personal Contract)

A Personal Contract defines for a user his daily shift for regular week days and also for 3 special days. It therefore contains 7 daily Shifts (one for each day of a regular week) and 3 other Daily Shifts for 3 special periods (Holidays, SPC1 and SPC2). These special periods are defined in the *T&A Holidays* screen either from Parameters menu or from this T&A module.

A Personal Contract must be applied to one department, selected from the Database department (which therefore has to be defined previously). All personnel in a department must use the same Personal Contract.

4. Vacations

In order to enter specific vacation days to a cardholder, user would enter the Cardholder Screen and select the *Vacation* Tab. This tab appears only if the T&A T+ module is enabled. In this 'Vacations' screen, user clicks on the "Add Vacation" button, and enters "From Date", " To Date" of the vacation. The T&A report calculates the total number of vacation days taken during the report date selection. During vacation days, the worker will not be expected to work (no Missing hours)

12.1.4.2 'T+' CLOCKING

When a cardholder is granted access at a specific reader, the code associated to the transaction and which will associate the transaction to a category, is one of the two following:

- Either the default transaction code of the reader used (defined in the *Reader/Miscellaneous/Badge Format* screen)

- Or the code typed-in by the cardholder at the reader keypad, which overwrite the reader default transaction code.

In the 'T+' system, it is not necessary for every activity (category) to have its own 'clock-off' transaction. Any new 'clock-on' transaction (i.e. a transaction which start the time calculation) is assumed to close the previous activity. However, there must be a transaction at the end of the working day. For this, transaction code 1 normally represents 'clock OFF'.

Example: In the previous *T&A example* , clocking at reader 'Dining room' at 13h00 with transaction code 40 will start the category 'Meals'. Because the 'Meals' is a working time category, the next hours passed in this category will be calculated in the general working time counter and will also appear in the 'Total per category' counters , under the 'Meals' category, below the report. The next clocking, at 13h30 on reader 'Factory IN' with transaction code 00 will end the previous category, i.e. the meals, and will start the regular working time.

Clocking at 15h01 on reader 'Gym' with transaction code 50 will start the 'Gym' category and will ends the normal time work. Because the 'Gym' is a non-working time category, the next hours passed in this category will not be calculated in the general working time counter but will appear in the 'Total per category' counters, under the 'Gym' category below the report.

The transaction Log with the transactions codes is as follows:

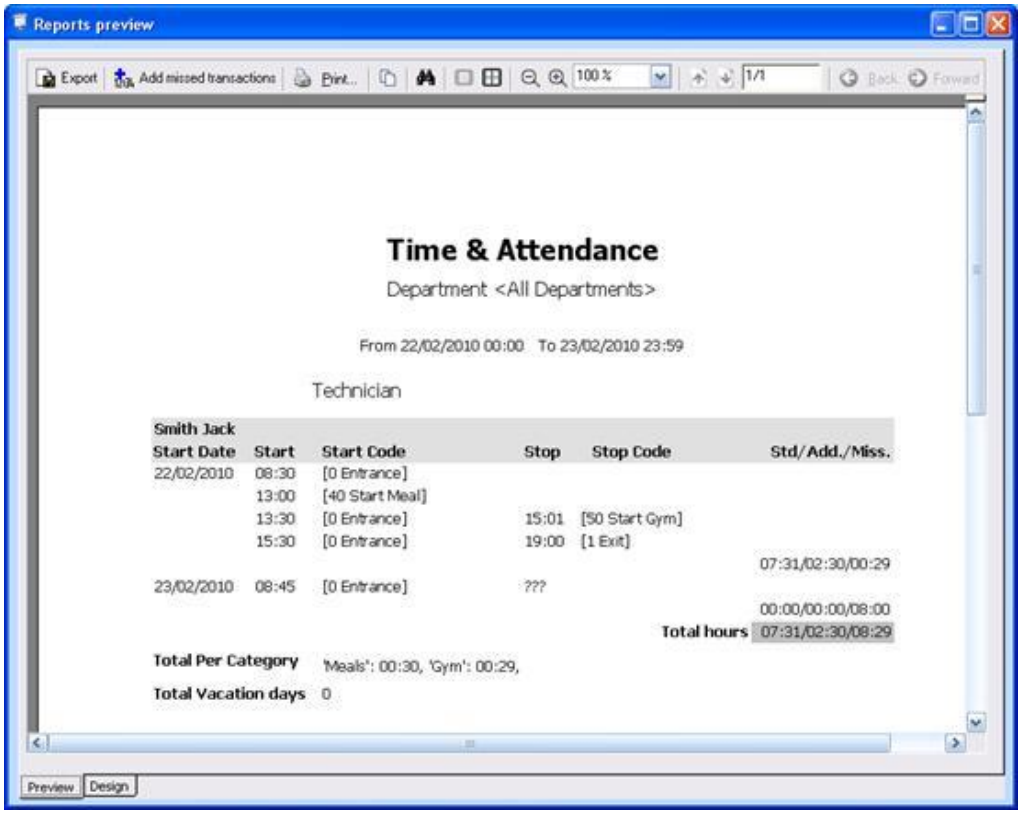
25/01/10 08:15:00 Access Denied 'Smith Jack ' From reader 'Parking IN' - Not Authorized at this time
25/01/10 08:30:00 Access Granted 'Smith Jack ' From reader 'Parking IN'
25/01/10 08:30:26 Access Granted 'Smith Jack ' From reader 'Factory IN'
25/01/10 13:00:29 Access Granted 'Smith Jack ' From reader 'Dining Room' Transaction code 40
25/01/10 13:30:06 Access Granted 'Smith Jack ' From reader 'Factory IN'
25/01/10 15:01:18 Access Granted 'Smith Jack ' From reader 'Gym' Transaction code 50
25/01/10 15:30:36 Access Granted 'Smith Jack ' From reader 'Factory IN'
25/01/10 19:00:09 Access Granted 'Smith Jack ' From reader 'Factory OUT' Transaction code 1
25/01/10 19:05:00 Access Granted 'Smith Jack ' From reader 'Parking OUT'

12.1.4.3 'T+' MODULE – SAMPLE REPORT

To issue a report, go the tool bar item 'Modules' and select 'Time attendance'. The *Time Attendance screen* appears which must be filled to get a report.

Note: The check box 'Check entry/exit readers only' is not present , as T&A readers for the 'T+' module are defined in the *Reader/General* screen as 'Entrance Reader/Exit Reader'

Example: Hereunder the report issued based on the previous *T&A example* :



Explanation:

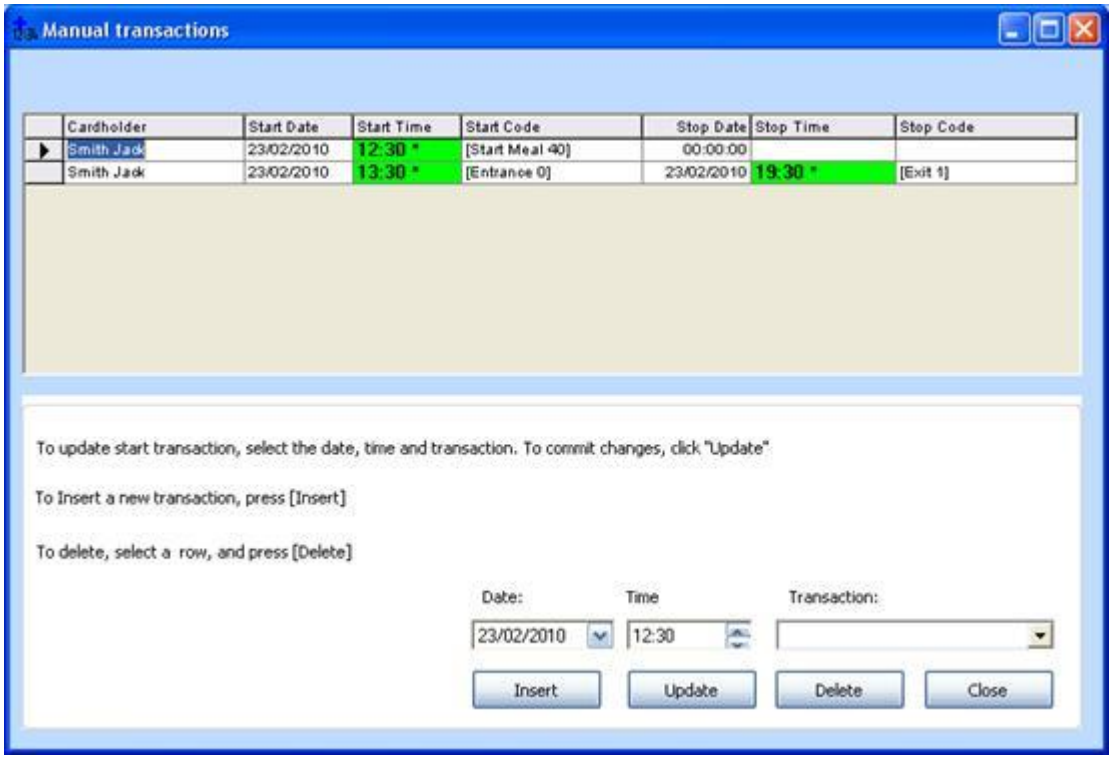
1. The left column ('Start Start code') contains transactions which begin working Time (paid) category. The right column ('Stop Stop code') contains transactions which end working time (paid) category or begin non-working (unpaid) category.
   In the example, 'Meals' are considered 'paid', so the first working time period is only ended by the clocking at the Gym (15:01). Thus, the first 'working time' period extends until the first 'non-working time' transaction ('50 Start Gym')
2. No specific 'clocking OFF' transaction is required for either the Dining Room or the Gym. In each case, any 'clocking ON' transaction will be regarded as also signalling the 'clocking OFF' from the previous category.
3. In our example the daily shift is set to start at 08:30 and end at 16:30. Thus, the report shows a total of 10:01 hours working time, with 7:31 hours of normal working time. The 2:30 hours between 16:30 and 19:00 is considered as 'Add' (=overtime)
4. The 0:29 hours time spent in the Gym is shown as a separate category. The same period (0:29) is also recorded as 'Miss' – i.e. missing time. This represents non-working time that falls within the boundaries of the required 'normal time' as defined in the relevant daily shift.

Missing Transactions:

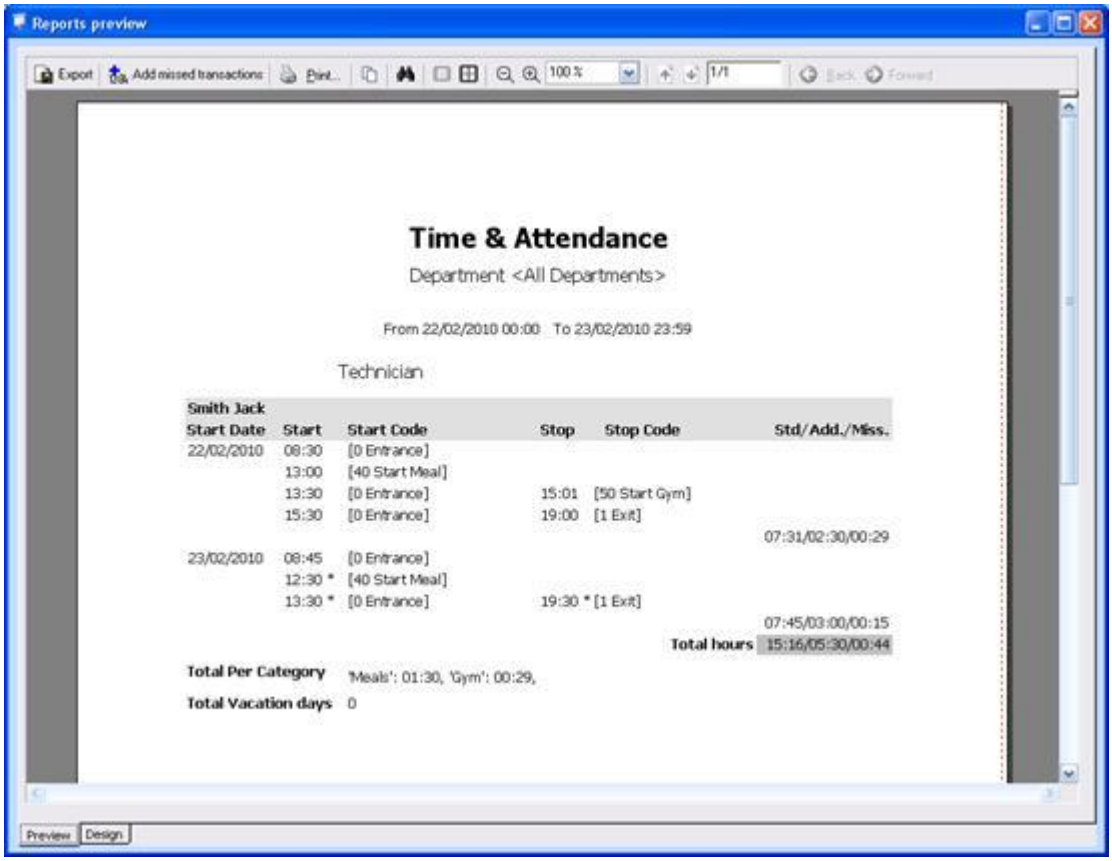
Missing transactions are shown with '????' and prevent the application to compute the working hours of the day. They have to be manually updated.

Updating a transaction is done by clicking on the 'Add Missed Transaction' button. When a missing transaction ('???') is updated, it then appear with a '*' in the report. Updated or modified transactions are inserted in the log file.

In the previous sample report, an end of working transaction is missing on the 23/02/2010. For example, pressing the 'Add Missed Transactions" button will allow adding 3 transactions: "12:30: Start Meal", "13:30 Entrance" (this transaction will close the meal category) and "19:30: Exit" as follows:



The updated report will be as follows:



Adding transactions using the *T&A Transaction Wizard* screen:

The T&A transaction wizard allows the user to generate multiple transactions that will be inserted into the log of T&A transactions, so that the resulting reports include these transactions. Instances where the wizard would be used include:

- Entering multiple transactions for an employee who missed work but must be credited with the time for reporting or pay purposes (leave, sick leave, military duty, etc.)
- Adding transactions to multiple employees where they must be credited with time for a period where they did not or could not clock (Maintenance, Training, Department fun day, clocking that would have taken place during a power outage, etc)

The module will create manually transactions (marked with a '*') according to the category selected, which will be like a regular punched transaction. The only difference that these manual transactions can be deleted or changed.

13 SCENARIOS AND EXAMPLES

In this section:

- *Event Handling Examples*
- *Anti-Passback – Concepts and Examples*
- *Mantraps Concept*
- *Parking Module – Example*
- *Lift Module – Concept and Example*
- *Guard Tour – Concept and Example*
- *Crisis Level – Concept and Example*
- *Importing Data from External Databases - Examples*

13.1 EVENT HANDLING EXAMPLES

13.1.1 USING ALARM ZONES (INPUT GROUPS) WITH PRE-ALARM NOTIFICATION ('CALL TO BADGE')

Alarm Zones (or Inputs Groups) are Inputs that are logically associated together. By logically grouping a set of inputs, such as all the door, window and movement sensors in an area, an "Alarm Zone' is created that can be armed or disarmed (activated or deactivated) either automatically using the Event Handling Programme, or manually with a single command (via Actions or Processes). The whole area can be monitored as a single entity.

Example :

1. The alarm inputs of a floor are set, as an Input Group, to be armed at 20:00.
   The pre-alarm delay is set to 15 minutes, with a warning process that activates a buzzer for 20 sec.
2. A Global Reflex postpones the intrusion system activation for 60 minutes if a valid card is passed at a reader that is associated with the Alarm Zone.
3. At 19:45 the system activates the buzzer, reminding the employees of that floor that they have 15 minutes to leave area or to postpone the intrusion system activation.
4. At 19:55 one of the employees passes a card at the specified reader and thereby moves the activation one hour forward to 20:55. (i.e., the system sends a command to the controller to postpone arming the Input Group)
5. The system will activate the next buzzer warning 20:40, 15 minutes before the new activation time.

SYSTEM SETUP

Before using Event Handling facilities, the relevant entries must be set in the.ini file.

1. Open the .ini file, and check that the following entries exist:

   AlarmZones = 1

   ControllerInputGroup = 1

   Verify that both entries are set to 1 and if not, set their values to 1.
2. Save and close this file, then restart the application.
3. Make sure the 'Alarm definition for group of input' option in the *Tools/Options/General* screen is selected

INPUT GROUP SETUP

1. Create an *Input Group*
2. In the *Event Handling Program/Alarms* screen, choose the "View groups of inputs" option and select a Weekly Program for the input group
3. Create a Process that will serve to notify the occupants of an approaching activation of the intrusion alarm system (for example, by activating a relay connected to a buzzer during 20 sec., lighting a red light, etc.)
4. In the *Input Group* screen, select this Process and set a pre-alarm delay between 1 and 120 minutes.
5. Initialize all the controllers.
6. To set a Input Group activation to be postponed, create a Global Reflex that triggers an Action from the type: "Input Group Deactivation During...", by setting the Input Group to postpone and the number of seconds/minutes for which the Input Group activation should be postponed.

13.1.2 COUNTER - CONCEPTS

Counters can contain values, compare them against predefined parameters whenever their value changes, and activate Processes if preset 'compare' conditions are satisfied or not satisfied.

Counters are incremented or decremented by 'Increment Counter' and 'Decrement Counter' Actions. Each time the value of a Counter changes, its value is compared against its preset Min and Max values, and a user-specified Process will be carried out depending on the result

The Counters screen allows the user to define Counters, set preset values, choose the compare conditions and set the Processes that must be carried out depending on the result of the compare.

Examples

- Count the number of persons in a room (so as not to leave a room empty, to signal excess of maximum capacity, to switch office lights off when all the occupants have left, to activate an alarm system when all the employees have left the building, etc.)
- Check as a specific room or cinema fills, and refuse access when capacity is reached

Operating Mode

1. Create a Counter (*Counter* screen)
2. Create an action/process incrementing the counter (*Process* screen, *Action* screen)
3. Create an action/process decrementing the counter (*Process* screen, *Action* screen)
4. Create a global reflex defining the event that increments the counter (i.e. invokes the action/process) (*Global Reflex* screen)
5. Create a global reflex defining the event that decrements the counter (i.e. invokes the action/process) (*Global Reflex* screen)

   Caution - Conditions linked to a counter may also trigger some processes: Be careful not to create a logical loop:

   Example:

A Process that decreases the value of a Counter, where the Counter itself checks if it is below the preset Min value – such a process will repeat endlessly, as the first condition is always satisfied, so the action will always be invoked

13.2 ANTI-PASSBACK – CONCEPTS AND EXAMPLES

The system distinguishes between 3 types of Anti-Passback, described in the following paragraphs:

- *Local Anti-Passback* – prevent a particular reader from being used twice in succession using the same badge
- *Timed Anti-Passback* – similar to Local Anti-Passback, but the restriction applies only for the defined time – after that, the same badge can be used again.
- *Global Anti-Passback* – forces cardholders to follow pre-determined paths.

Both Local Anti-Passback and Global Anti-Passback can be operated in 'Soft' mode, by using the *Soft Anti-Passback* option – This mode allows an access transaction that would normally be prevented by the Anti-Passback rules, but merely reports it, rather than actually preventing the access.

CANCELLING OR OVER-RIDING THE ANTI-PASSBACK RESTRICTIONS

The Anti-Passback feature can be cancelled for cardholders who are to be allowed to move without the APB restrictions, by setting the 'No APB, no timed APB' option in their *Cardholder/Personal* screen. This is sometimes applicable to certain types of Maintenance staff, Guards who might enter or leave using a physical key, etc.

A one-time permission to move without the APB restriction being applied can be granted by clicking the Reset button on the *Cardholder/Location* screen.

13.2.1 LOCAL ANTI-PASSBACK

Local Anti-Passback is the basic form of this feature, and only applies to readers that share the same controller. After a badge is passed at one reader on a controller, it must be passed at another reader on the same controller before it can be used again at the first reader.

Note: If reading the badge on a different controller must release the badge for the first reader, then Global Anti-Passback must be used.

Local Anti-Passback is managed by the controller itself. To activate it, check the Anti-Passback box in the *Reader/Access Mode* screen.
The 'From' and 'To' fields of the 'APB level' in the *Reader/Door Control* screen must be left empty.

Example of Local Anti-Passback: With a four-reader controller, two doors may be controlled, with two readers controlling each door (Readers 1/3 control entrance/exit of door 1 and readers 2/4 control entrance/exit of door 2).
Result: The same card will not be accepted twice successively at the same reader. It has to be passed once at one reader (i.e. entrance) and once at the second reader (i.e. exit). This prevents a person, who has been granted access, from giving his card to somebody else who is trying to access immediately after the first person.

13.2.2 TIMED ANTI-PASSBACK:

This prevents a card from granting access twice at a same reader within in a pre-defined time. A second access will only be authorized after the defined delay. Enter the required delay time in the 'Time APB' field (between 1 and 15 minutes) in the *Reader/Access mode* screen. If the Local or Global Anti-Passback feature is also to be activated, check the Anti-Passback box.

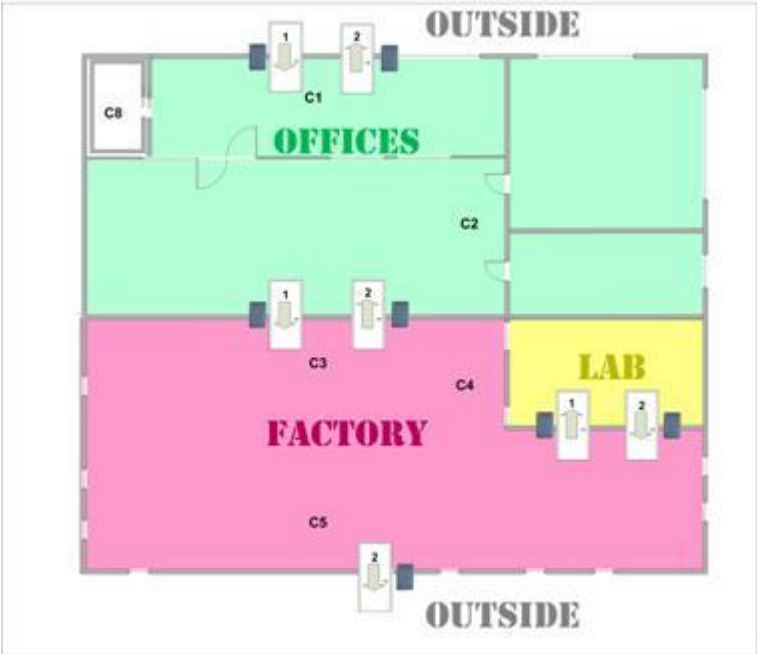
> Note: Timed Anti-Passback is also called 'Lockout Delay', because a badge is 'locked out' for the delay period.

13.2.3 GLOBAL ANTI-PASSBACK:

With the Global APB feature, the user can restrict access through readers by forcing cardholders to pass a specific sequence (or path) of readers. The site is divided into APB 'levels', and readers are defined in such a way that cardholders can only pass only from one pre-defined level to another.

EXAMPLE

Let's say the user wishes to separate the site into the levels shown below.



To activate Global Anti-Passback, the Anti-Passback box in the *Reader/Access mode* screen must be checked, and the fields APB Levels fields **From** and **To** must be defined in the 'APB level' section of the *Reader/Door Control* screen must be .

First, create the APB Level definitions, by opening the *APB Levels* screen. (To do this, select the [...] symbol next to the **From** or **To** definitions in the APB Levels field of the *Reader/Door Control* screen). Press New, and enter the required names.

In the example above, four levels must be created – **Outside**, **Offices**, **Factory** and **Lab**.

Then, for each set of readers where the control is to be applied, the user specifies the **From** and **To** APB Levels, using the dropdowns next to the APB Levels fields of the *Reader/Door Control* screen. Allocate APB levels to the readers as follows:

Controller	Reader	From	To
C1	1	Outside	Offices

Controller	Reader	From	To
	2	Offices	Outside
C3	1	Offices	Factory
	2	Factory	Offices
C4	1	Factory	Lab
	2	Lab	Factory
C5	2	Factory	Outside

HOW IT WORKS

- Every time a badge is read, the system checks that it is still in the area where it was last read.

- After an access is granted, the system records the new area which the badge entered.

Note: The APB Levels defined for the readers do not have to be sequential. For example, the reader on controller 5 in the example is set to allow cardholders to 'return' directly to 'Outside', without traversing the 'Office' Level.

EXAMPLES OF GLOBAL ANTI-PASSBACK

- Enforce discipline by having cardholders passing through a main entrance checkpoint rather than using a back entrance before they go to their respective offices.
- Prevent a cardholder authorized for a particular area from passing his badge to someone outside that area so that they can use the badge to enter (e.g. dropping a badge out of a window)
- Prevent a second person (or car) from entering with an authorized one: it will be stopped at the next checkpoint because not registered at the previous level.

QUERYING THE CURRENT APB STATUS OF A CARDHOLDER

At any time, the current APB status of a cardholder is shown in their *Cardholder/Location* screen

SETTING UP GLOBAL ANTI-PASSBACK

To set up Anti-Passback, the following steps are required:

1. Define the different APB levels using the [...] button next to the APB Levels field in the *Reader/Door Control* screen
2. Assign **From** and **To** APB levels for each reader in the *Reader/Door Control* screen
3. Set the APB option for the applicable readers in the *Reader/Access mode* screen

Notes:

1. It is recommended to use the Door Feed-back option (*Reader/Door control* screen) when the Anti-Passback feature is set, to be sure that the cardholder has physically passed the door before applying the new APB level.
2. The APB level for all readers can be reset by clicking on Reset all in the *Cardholder/Location* screen.
2. After initializing controllers, all cardholders have one free 'APB pass'. This allows each cardholder a single transaction, which is used to establish their new APB level.
2. Each time the system PC receives a cardholder access-granted transaction, it updates the cardholder's new APB level in all controllers. Thus, in order to work properly, all controllers must be online and communications must be maintained at all times. (see *Using Global APB without fulltime communication to the PC*)

13.2.3.1 USING GLOBAL APB WITHOUT FULLTIME COMMUNICATION TO THE PC

Global APB requires real-time communication between Controllers and the system PC.
In environments where there may be interruptions in communications, it is possible to maintain APB restrictions between a group of controllers that are linked via their 2nd communications bus. The following setup steps are required:

1. Controllers must have firmware versions dated 03/12/2006 or later, and Kit Com2
2. The following options must be set in the .ini file:

   GlobalAPBwoPC = 1

   DontUpdateAPBLevel = 1

   Resent Definition on Deny = 0

   DynamicNumBadge = 0

13.2.4 SOFT ANTI-PASSBACK:

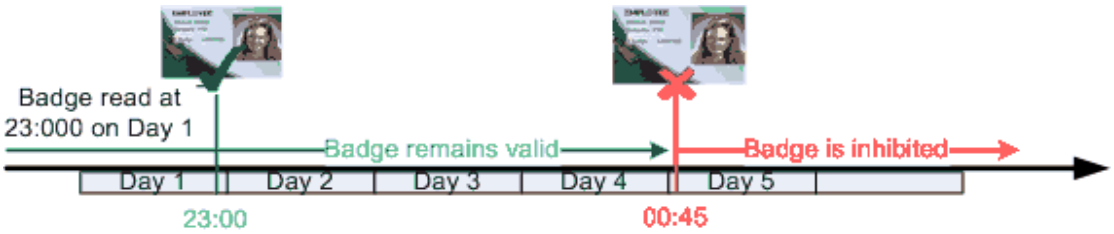
Under normal Anti-Passback rules, when a cardholder requests to access a second time from the same reader which is defined in Anti-Passback mode, the controller denies the access AND reports the event as 'Access Denied - Anti-Passback'.
In Soft Anti-Passback mode, the controller grants the access and only reports the event for information.

To activate Soft Anti-Passback, first select the **Soft anti pass back** box in the *Tools/Options/Server* screen. Then, in the *Reader/Access mode* screen, check the **Anti-Passback** box – this will then show the 'Soft' option. Checking the **Anti-Passback** box applies Soft Anti-Passback to that reader.

Note: Soft Anti-Passback does not work with Slave readers.

13.3 AUTOMATIC CARD INHIBITION IF A CARD NOT USED AFTER X DAYS

It is possible to automatically inhibit cardholders who have not used their card for a specified number of days. The checking is done every night at 00:45.
For example, the system may be configured to inhibit all cardholders whose badges are not read for 3 days:



A cardholder who passed his badge on day '1' (at any time) will have access on days '2', '3' and '4'. If the badge is not read during these 3 days, the system will invalidate automatically it on day '5' at 00:45 a.m.

Note: This function works only if the application is running at the time that inhibition must be set (i.e. 00.45 each day. If the PC is turned off at night, the inhibition command will not be sent to the readers at 00:45 a.m., and the system does not check this function again on startup.

Operating Mode:

1. Exit the application and look for the ini file at the main application folder.
2. *Open it with Notepad and look for the following entry:*

   `AutomaticInhibition = 0`
3. If this line does not exist, run the application, go to "Tools - Options" and click "OK". This operation rebuilds the ini file and inserts all the possible entries according to the latest application version.
4. *Set the value according to the required days number before inhibition.*
   e.g. to inhibit all the cardholders whose badges were not read for 3 days, set:

   `AutomaticInhibition = 3`
5. Save and close this file, and restart 5.

13.4 MANTRAPS CONCEPT

The man trap mode supervises the activation process of a double door entrance.

The conditions for opening the second door of a mantrap are:

- The first door opening and closing
- Optionally the activation of an input

A 2-door controller may manage one mantrap with readers 1 and 2. A 4-door controller may manage 2 mantraps, one with readers 1,2, the other with readers 3,4:

A door is defined as a 'Mantrap' via the 'Door type' field of the *Reader/Door control* screen. The system recognizes 3 types of mantrap:

Mantrap Type 1

When a door, defined as Mantrap type 1, is opened after access is granted (either through its reader or through its RTX button) (the door status is given by the door contact defined for that door), a second access cannot be granted from the reader of this door until the opposite door is opened and then closed. This opposite door may be opened either through its reader (if it is located inside the mantrap) or by its RTX button.

If the mantrap must be used in both directions (entrance and exit), both readers must be installed outside the mantrap and both RTX buttons inside the mantrap (see drawing), and both doors defined as Mantrap Type 1. Once one door is opened, its reader stays locked until the opposite door is opened and closed, using its RTX button inside the mantrap.

Mantrap Type 3

Mantrap type 3 is similar to type 1 except that as soon as a first door is opened and closed, then the opposite one is automatically opened. Here too, the first door will be unlocked only when the second door is closed.

Mantrap Type 4.

Mantrap type 3 is similar to type 1 except that as soon as a first door is opened and closed, the opposite one will be opened upon activation of a controller input (defined in the

'Controlled by' field). Here too, the first door will be unlocked only when the second door is closed.

Timeout delay:

When a person is granted access into the mantrap, the mantrap door(s) are locked until the person exits the mantrap. However, After a 60 sec. timeout, door(s) will be unlocked even if the person is still inside.

To prevent this timeout delay, select the option 'leave door relay open during all door open time' in *Reader/Miscellaneous/Badge Format* screen.

> ***Warning:*** In this case, readers will stay locked until the person exits the mantrap or until they are manually unlocked.

Manually unlocking mantrap readers:

Mantrap readers are unlocked as soon as one of the reader's parameters are downloaded to the controller. (by selecting the Controller in the *Communications/Diagnostic* screen, and clicking Download)

Other door control capabilities:

There are two other modes to control a door, which are not considered as Mantraps because they control only one door:

1- Door controlled by an input:

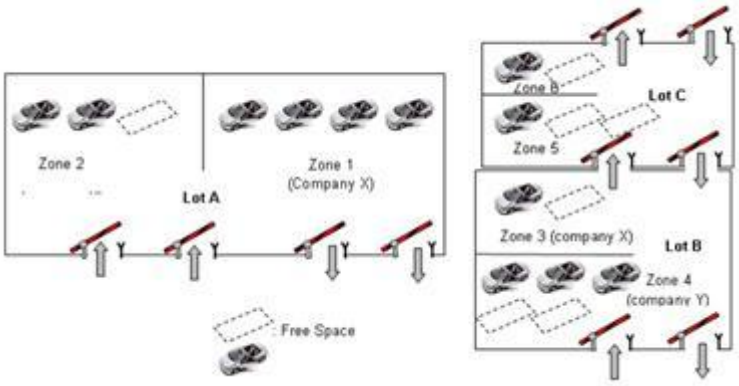
Some applications require a door to be controlled by a signal, i.e. when a signal is active, the door may not be opened, neither by a card nor the RTX button. To activate this feature, select the 'Controlled by input' option in the 'Door type' field of the *Reader/Door control* screen. The input is defined in the 'Controlled by' field.

2- Door Feedback:

When the 'Door feedback' option (*Reader/Door control* screen) is selected, the controller will wait during the "door open time" until the door has been opened and closed, to effectively record the transaction. (status indicated by the door contact).

If the cardholder has not physically entered after the delay, i.e. the door has not been opened and closed, the controller will record a "denied lock" transaction in its buffer.

13.5 PARKING MODULE – EXAMPLE



The diagram illustrates the map of a building car park. The Company X and the Company Y rent parking spaces in this building:

Company X rents 4 parking spaces in Lot A and 2 parking spaces in Lot B.

Company Y rents 3 parking spaces in Lot A and 5 parking spaces in Lot B.

To implement this requirement, it is necessary to create the following items:

- Two Parking Lots: Lot A and Lot B
- Two Parking Users Groups: Company X and Company Y
- Four parking zones:
- Zone 1 (4 spaces): Company X in Lot A
- Zone 2 (3 spaces): Company Y in Lot A
- Zone 3 (2 spaces): Company X in Lot B
- Zone 4 (5 spaces): Company Y in Lot B

All the cardholders of a user group are interdependent. Access to members of a user group is contingent to the space available in the zone allocated to the group. If five employees of Company X arrive at the same time in parking lot A, access will be granted to the first four cars and denied to the other cars of the group.

Access permissions to a parking lot are independent of authorizations to other parking lots. An access denial in Lot A does not prevent access in Lot B.

If all the parking spaces of a company are occupied, other cars of this company will be denied access. Nevertheless other cars from other companies could still reach their respective zones in the same parking lot according to their own occupancy rate.

13.6 LIFT MODULE – CONCEPT AND EXAMPLE

13.6.1 LIFT MODULE - EXAMPLE

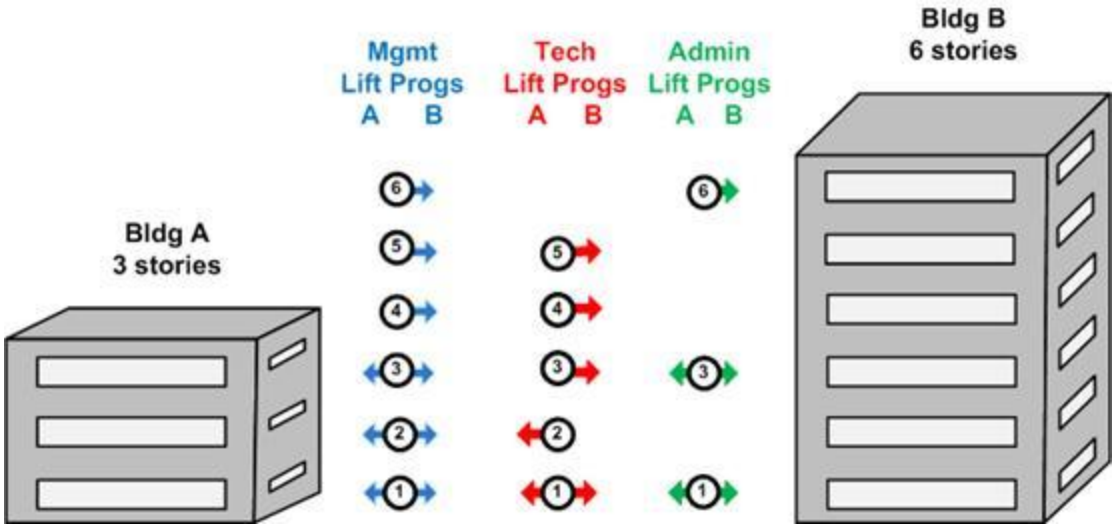
A site consists of two buildings, one has three floors and the second has six. Each building has its own lift.

Three user groups are defined:

Management can access all floors in both buildings

Technical staff can access floors 1 and 2 of the first building and floors 1, 3, 4 and 5 of the second building

Administrative people can access floors 1 and 3 of the first building and floors 1, 3 and 6 of the second building



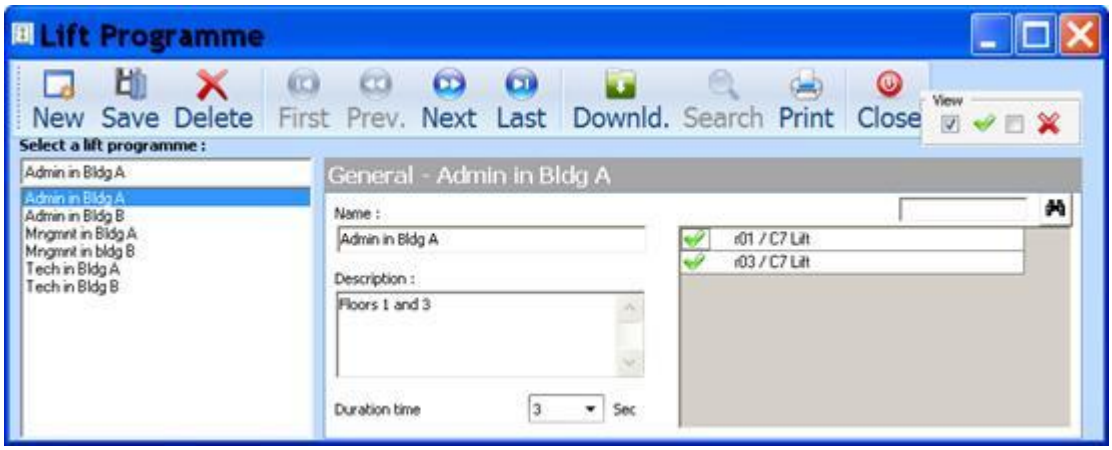
Setting up this example

In the *Options/Server* screen, set the option 'Different lift programme for each reader'.

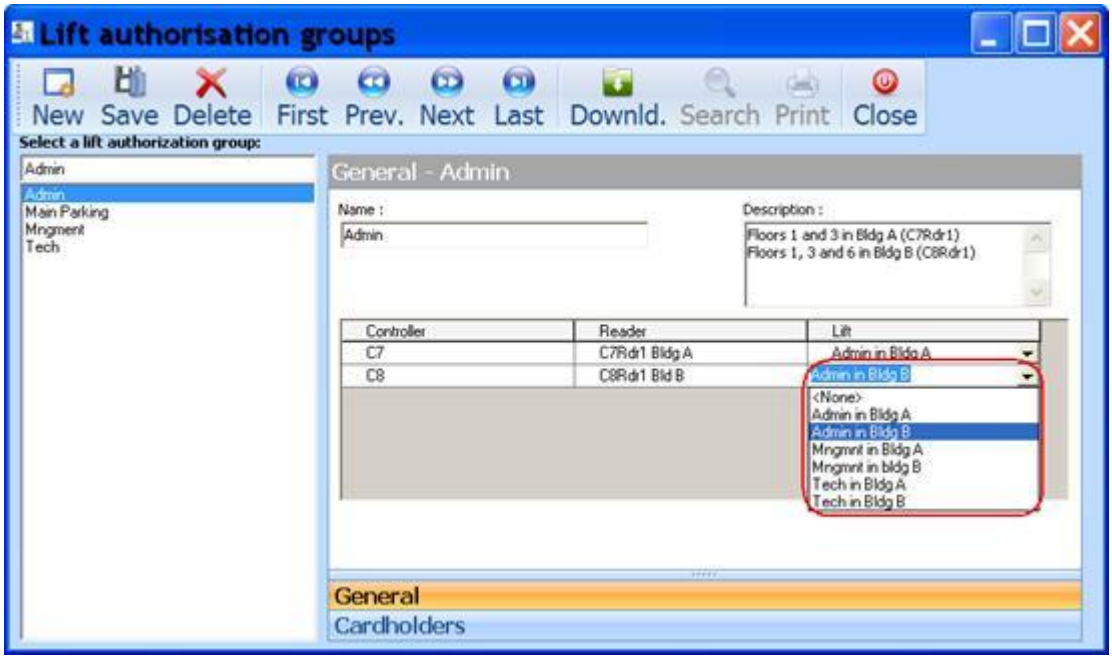
In the *Controller/General* screen, create two controllers as 'Lift', one for each building.

Name	Description	Number	Controller
C7Rdr1 Bldg A	Lift in Building A	1	C7
C8Rdr1 Bld B	Lift in Building B	1	C8

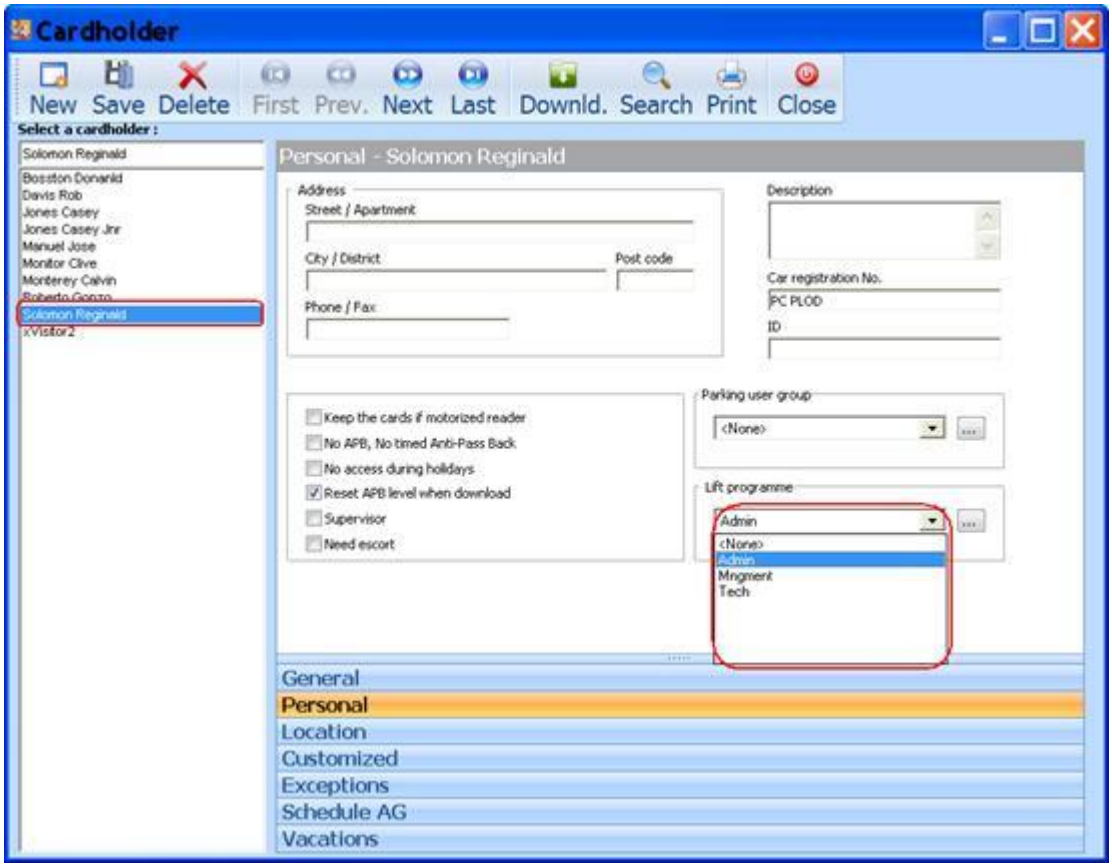
In the Lift Programme screen, create separate Lift Programmes for each group of users, specifying which relays must be activated on each of the lift controllers, indicating which floors that group may access, for each building



In the *Modules/Lift Authorization Group* screen, create three lift program groups, **Management**, **Technical** and **Administration.** For each group, allocate a Lift Program to each reader



Allocate each member to his Lift Program group, by selecting from the "Lift program" list from the *Cardholders/Personal* screen.



13.6.2 LIFT MODULE CAPACITY – USING EXTENSION CARD WITH ADDITIONAL RELAYS

Capacity - One Controller has a capacity of up to 64 floors

A basic controller has 4 relays. With a 12-relay extension card plugged in and three 16- relay satellite cards connected to its port 2, the controller may have 64 relays and therefore control 64 floors. Several controllers can supervise different lifts in parallel.

Multiple lifts

A controller can manage up to 4 lifts with identical authorizations (*Modules/Lift Program* screen)

Example: a controller has 4 readers and 64 relays available

Reader 1 - Lift 1:	10 relays – 10 floors
Reader 2 - Lift 2:	20 relays – 20 floors
Reader 3 - Lift 3:	30 relays – 30 floors
Reader 4 - Lift 4:	4 relays – 4 floors

13.7 GUARD TOUR – CONCEPT AND EXAMPLE

13.7.1 DEFINING ARRIVAL AT A CHECK POINT

When defining a Guard Tour, each Checkpont entry has 3 times associated with it:

'Time'

The time, relative to the start of the tour, when the Guard should reach this checkpoint

'-'

The amount of time before the expected arrival at the checkpoint during which the guard's arrival would be called 'early'

'+'

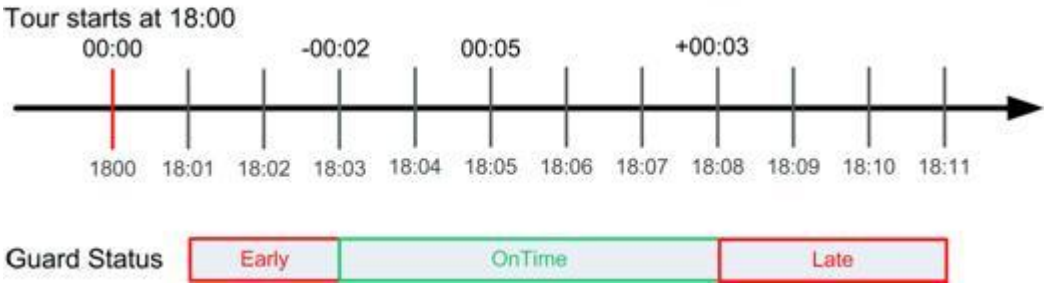
The amount of time after the expected arrival at the checkpoint during which the guard's arrival would be called 'late'

To illustrate this, here is how a Checkpoint might be defined, and how a Guard's arrival will be reported:

Checkpoint Definition in Tour

Checkpoint	Time	-	+
OfficeDoorIN	00:05	00:02	00:03

Relative Time for this Checkpoint



13.7.2 BEGINNING, ENDING AND RESTARTING A GUARD TOUR

BEGINNING A TOUR

The application provides two ways to launch a guard tour:

Manually (by executing a launching process)

1. In the "Event handling - Actions" screen, create an action with the type "Start a guard tour", by specifying the corresponding guard tour program and the guard name.
2. In the "Event handling - Process" screen, create a process including this action.
3. Launch the process via the "Manual action - Execute Process" screen.

Automatically (using a Global reflex)

1. Define a tour process as explained above.
2. Create a Global reflex in the "Event handling - Global Reflex" screen, which will launch the tour process by any trigger of the system (by swiping or by changing input status).
3. The guard tour may be launched at a specific time and date, by choosing the "Scheduler" as global reflex event type.

   Note: Using Weekly Programme with Global Reflexes initiated by the Scheduler:
   A specific weekly programme may be allocated to a global reflex. If this is done, the guard tour will not be launched at the 'red periods' of the selected weekly program.

RESTARTING A TOUR

Restarting a running tour will stop this tour and replace it by a new instance.

ENDING A GUARD TOUR

The guard tour ends 15 minutes after the expected arrival time at the last checkpoint. After this delay, the guard tour is removed from the "Guard Tour Status" screen.

13.8 CRISIS LEVEL – CONCEPT AND EXAMPLE

The Crisis Level function enables simple and quick way to change the access permission of the site. Rather than changing the access permissions for individual Cardholders, which would involve downloading new parameters for each cardholder to each controller, the "Crisis Level" function provides a general security setting for the whole installation, which can be changed by a single action using the *Crisis Level* screen.

The Crisis Level is a value between 0 and 7, with 0 being the lowest level.

When the site Crisis Level is not = 0, only cardholders with a higher or equal Crisis Level will be granted access.

13.8.1 USING THE CRISIS LEVEL SET IN THE CARDHOLDER'S ACCESS GROUP

Each Access Group defines the Crisis Level applicable at each Reader.

Each time a badge is read, the Access Group of the cardholder is checked, and the Crisis Level for that Reader as held in the Access Group is compared with the Site Crisis Level. If the Crisis Level applicable to the cardholder is lower than the Site Crisis Level, the Cardholder is denied Access.

> Note: In each AG, all readers on the same controller must always be set to the same Crisis Level.

EXAMPLE 1 – USING THE CRISIS LEVEL SET IN ACCESS GROUP

Consider three Cardholders: Mike, Diane and Fred, and how they can move at the following readers: Controller1 (OfficeIN and OfficeOUT), and Controller2 (LabIN and LabOUT) for two different settings of the General Crisis Level. The 2 tables below show, for each of the Cardholders, what the Crisis Level is for their Access Group at each of the doors, (shown on 1st row for each cardholder), and whether they will be allowed to proceed (shown on 2nd row for each cardholder).

The first table shows the result when the General Crisis level is set to 3, and the second table shows how this will change if the General Crisis Level is set to 4.

Access Result when General Crisis Level = 3

		Controller 1		Controller 2	
Cardholder		**Office IN**	**Office OUT**	**Lab IN**	**Lab OUT**
Mike	Reader Crisis Level in AG	2	2	3	3
	Access granted?	No	No	Yes	Yes
Diane	Reader Crisis Level in AG	3	3	4	4
	Access?	Yes	Yes	Yes	Yes

		Controller 1		Controller 2	
Cardholder		**Office IN**	**Office OUT**	**Lab IN**	**Lab OUT**
Fred	Reader Crisis Level in AG	4	4	5	5
	Access?	Yes	Yes	Yes	Yes

Access Result when General Crisis Level = 4

		Controller 1		Controller 2	
Cardholder		**Office IN**	**Office OUT**	**Lab IN**	**Lab OUT**
Mike	Reader Crisis Level in AG	2	2	3	3
	Access?	No	No	No	No
Diane	Reader Crisis Level in AG	3	3	4	4
	Access?	No	No	Yes	Yes
Fred	Reader Crisis Level in AG	4	4	5	5
	Access?	Yes	Yes	Yes	Yes

As can be seen in the example, when the General Crisis Level was changed from 3 to 4, Mike could no longer use the Lab readers, and Diane could no longer use the Office readers.

13.8.2 CRISIS LEVEL SET IN THE CARDHOLDER'S PERSONAL CRISIS LEVEL

Instead of being set to a specific value, the Reader's Crisis Level in the Access Group may be set to 'Use Personal Crisis Level'. In this case, the value for that particular cardholder as set in the Cardholder/General screen is compared to the Site Crisis Level. If lower, then access for the cardholder at that reader is denied.

Note: In each AG, all readers on the same controller must always be set to the same Crisis Level.

EXAMPLE 2 - USING THE CRISIS LEVEL SET IN THE CARDHOLDER'S PERSONAL CRISIS LEVEL

Assume that an Access Group is set up with the following Weekly Program and Crisis Level settings:

Reader	Weekly Programme	Crisis Level
Rdr01/Controller 001	WP Always	1
Rdr02/Controller 001	"	1
Rdr01/Controller 002	"	<Use Personal Crisis Level>
Rdr02/Controller 002	"	<Use Personal Crisis Level>
Rdr01/Controller 003	"	7

Reader	Weekly Programme	Crisis Level
Entrance	"	7
Office	"	4
Lab Door	"	4

While the Site Crisis Level is set to 0, all cardholders can be granted access at all readers.

In case of emergency, the site Crisis Level can be increased, depending on the severity of the emergency.

Thus, when the Site CL = 2 or more (changed either from the Manual Action screen or by an Action), Rdr01 and Rdr02 on Controller 001 become inaccessible.
When the value reaches 5 or more, Access to the Office and the Lab are prohibited, but Rdr01 on Controller 003 and the reader defined as 'Entrance' will remain accessible.

Rdr01 and Rdr02 on Controller 002 will only be accessible to cardholders associated with this Access Group if their Personal Crisis Level is set equal or higher than the Site Crisis level.

SUMMARY OF EXAMPLE 2

✓ = indicates access may be granted

× = indicates access will be denied

PCL = the cardholder's Personal Crisis Level will be used to compare against the Site CL

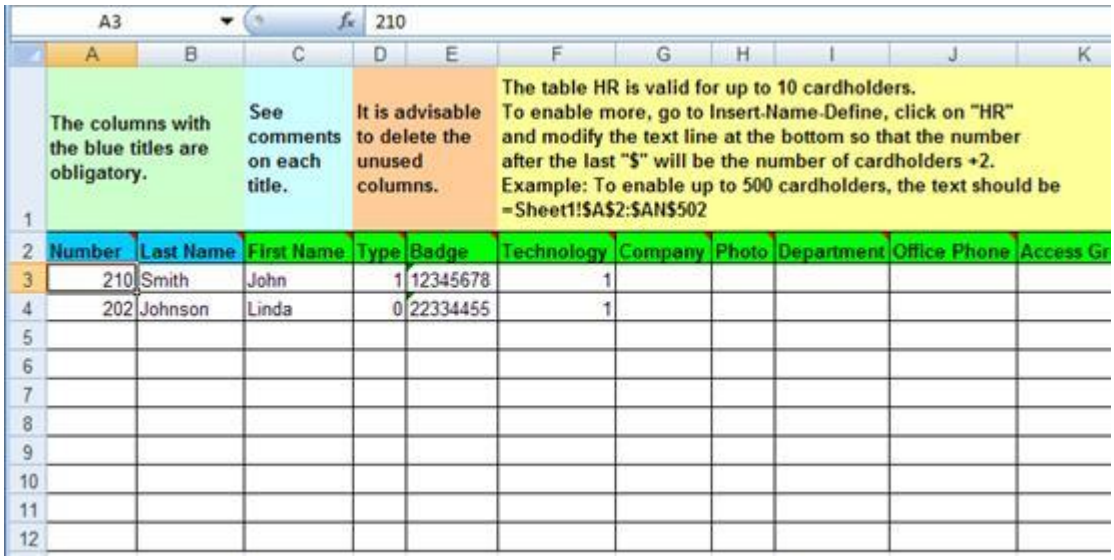
	Site Crisis Level							
Reader	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Rdr01/Controller001	✓	✓	×	×	×	×	×	×
Entrance	✓	✓	✓	✓	✓	✓	✓	✓
Office	✓	✓	✓	✓	✓	×	×	×
Rdr01/Controller002	✓	PCL	PCL	PCL	PCL	PCL	PCL	PCL

13.9 IMPORTING DATA FROM EXTERNAL DATABASES - EXAMPLES

By default, two profiles with identical fields are supplied: HrAccess and HrExcel. These profiles use respectively the 'Hr.mdb' and 'Hr.xls' files located in the Application folder. They have identical fields. The user can choose to fill one or other of these files, using Microsoft Access or Microsoft Excel with the cardholders' details to import. Once the file is completed, the file is imported by launching the Import operation from the Application.

13.9.1 EXCEL FILE EXAMPLE

The fields of the 'Hr.xls' file are built as follows:



	A	B	C	D	E	F	G	H	I	J	K
1	The columns with the blue titles are obligatory.		See comments on each title.	It is advisable to delete the unused columns.		The table HR is valid for up to 10 cardholders. To enable more, go to Insert-Name-Define, click on "HR" and modify the text line at the bottom so that the number after the last "$" will be the number of cardholders +2. Example: To enable up to 500 cardholders, the text should be =Sheet1!$A$2:$AN$502					
2	Number	Last Name	First Name	Type	Badge	Technology	Company	Photo	Department	Office Phone	Access Gr
3	210	Smith	John	1	12345678	1					
4	202	Johnson	Linda	0	22334455	1					
5											
6											
7											
8											
9											
10											
11											
12											

Note: In these two files, the name of the fields cannot be modified. The two first fields are MANDATORY.

The table below lists all possible fields.

Field Name	Max. Len.	Notes
Number	50ch	Mandatory field. Free text. Use unique values (no duplications). Modifying this number after the first import will create a new cardholder in the access control database.
Last Name	40ch	Mandatory field. Free text. NEW CARDHOLDERS CANNOT BE CREATED WITHOUT THIS FIELD. Do not use numeric data if possible.
First Name	40ch	Optional field. First or last name may be recurring, but not both jointly. For example, two John Smith cannot be created.
Type	1	Optional numerical field (0-Visitor, 1-Employee, 2-Guard, 3-Deleted).
Badge	8-12 (*)	Optional Numeric/Hex char field. Authorized digits: 0 to 9 and A to F. * 8-12 char length, depending on Badge Format settings.
Technology	1	Optional numerical field (1-Magnetic, 2-Bar code, 3-Wiegand, 4-Wiegand2, 5-Wiegand Keypad, 6-Bio Smart Card, 7-Touch, 8-Radio).
Company	40ch	Optional free text.
Photo		Optional Picture filename (File must be in \Media\Portraits folder)
Department	40ch	Optional free text.
Office Phone	15ch	Optional free text.
Access Group	40ch	Optional free text. Use the same name as in the access control application; if not, a new Access Group will be created. For MAG, use separator ';' (Len. of each AG name not to exceed 40ch.)
PIN code	4	Optional numerical field, authorized digits are 0 to 9.
From Date		Optional date field; set the same format as your Windows regional settings.

Field Name	Max. Len.	Notes
To Date		Optional date field; set the same format as your Windows regional settings.
Validated	1	Optional Boolean field (0-Not validated, 1-Validated)
Street	80ch	Optional free text.
City	40ch	Optional free text.
ZIP	15ch	Optional free text.
Personal Phone	15ch	Optional free text.
Description		Optional free text. No size limit – this gives cardholder description for information
Car Number	25ch	Optional free text.
ID	15ch	Optional free text.
Supervisor	1	Optional Boolean field (0-Not Supervisor, 1-Supervisor).
Label 1 to 4	40ch	Optional free text.
Lift Programme	40ch	Optional free text. Use the same name as in the access control application; if not, a new Lift Programme will be created.
Parking Users Group	40ch	Optional free text. Use the same name as in the access control application; if not, a new Parking Users Group will be created.
MultiSite Type	1	Mandatory field for MultiSite and Multicompany installations. (0-Local, 1-Shared, 2-Global)
Site	40ch	Mandatory field for MultiSite and Multicompany installations. Use same names as defined in access control application.
Personal WP	40ch	Optional field. Free text.
Personal Crisis Level	1	Optional field. Numeric values 0-7.
Keep card on Motorized Rdr	1	Optional Boolean field (0-No, 1-Yes)
No APB	1	Optional Boolean field (0-No, 1-Yes)
No access during Holidays	1	Optional Boolean field (0-No, 1-Yes)
Reset APB	1	Optional Boolean field (0-No, 1-Yes)
Need Escort	1	Optional Boolean field (0-No, 1-Yes)
Badge Printing Layout		Optional text field with filename of layout (as in \Reports\BP folder)
Visited Person	80ch	Optional text field with Lastname and Firstname of existing cardholder. (Names separated by space)
Visited Person Location	50ch	Optional free text.
Visit Purpose	50ch	Optional free text.
Visited Person Number	50ch	Optional alphanumeric field. Only use if option *Allow Duplicate Name* is set

Notes:

1. Field names cannot be changed
2. Fields may be sorted in any order
3. Before importing, make sure that all fieldnames are included in the 'HR' function name
4. Check there are no duplications in the 'Number' and 'Badge' data.

5. If importing an existing cardholder with the 'Badge' field empty, all the cardholders badges WILL BE REMOVED
6. Importing a record without an Access Group field results in the imported record being allocated the default Access Group of the Import screen

13.9.2 EXISTING CARDHOLDERS DATABASE UPDATE

The cardholders import procedure allows updating existing cardholders by using source databases (HR.xls, HR.mdb, etc.), even when this database does not contain a 'Last Name' column.

However, the following cases are considered errors:

- A new cardholder without a Last Name.
- An existing cardholder without last name, i.e., when the 'Last Name' column is present at the source database but the field has been deleted.

13.9.3 UPDATING DELETED EMPLOYEES

The Application supports the import of type 'Deleted'. The value 3 in the column "Type" means cardholder deleted. This means cardholders can be deleted even when the 'Synchronize and Delete' option is not checked.

13.9.4 EXAMPLE OF IMPORTING FROM AN EXTERNAL DATABASE

This example explains how to import cardholders from a database that has a different structure (different fields name, etc.):

CREATE THE IMPORT PROFILE:

1. Start the Application and create a new cardholders import profile
2. Name this profile and select the second tab "Connection Settings" and click the "Set connection" button
3. On the "User DSN" tab, click the "Add" button and select the format of the external database from the displayed list (e.g. 'Microsoft Access')
4. In the "Data Source Name" field type a logical name (e.g. MyHRimport) and click on the "Select" button for selecting the external DB file.
5. Click twice on the "OK" button to go back to the import profile screen.
6. In the "ODBC" field, type the name that corresponds to the data source (MyHRimport)
7. if the external DB has a different structure (different field names, etc.), select the "SQL Statement" option for entering the following SQL query:

```
SELECT [...] AS [Number], [...] AS [Last Name], [...] AS [First Name], Badge
FROM users
(e.g. ... = 'Index', 'First', 'Last', 'Badge', etc.)
```

8. Save and click on the "Connection test" button; the "Database connection successful" message must be displayed. By doing this the application confirms both the connection to the external DB and also the query syntax.

AUTOMATIC IMPORT

Create an "Import Cardholders" Action with the selected profile and create the associated Process and Global Reflex, and then the import can be done automatically, triggered either by an event (input alarm, card pass, etc.) or at a predefined schedule.

14 TECHNICAL INFORMATION

Information in this section is intended for use by trained Technical staff (Supplier technicians, or User technical staff working directly with Supplier technicians)

Expand the **Contents** *entry to see more detail*

14.1 DEFAULT CONNECTIONS FOR INPUTS, RELAYS AND RTX

When a new controller is created, automatically allocates some of its inputs and outputs for a regular door configuration:

- relay for the door open mechanism,
- input for the door contact (which detects the door status, open or closed, and may raise an alarm)
- input for the Request to exit (RTX) switch.

The following table shows the default parameters. These can be changed by the user in the relevant setup screens if required.

	Reader 1	Reader 2	Reader 3	Reader 4
Door alarm	i1	i2	i5	i6
Door relay	r1	r2	r3	r4
RTX (Request to Exit)	i3	i4	i7	i8

14.2 CONTROLLER TYPES

The following tables provide configuration information for Controllers:

Controller Configuration Tables
Controller Support for Readers, Inputs and Outputs
Controller Firmware versions for different door/reader configurations
Controller Memory Capacity

14.2.1 CONTROLLER SUPPORT FOR READERS, INPUTS AND OUTPUTS

Controller Type	Readers	Inputs	Outputs
TPL4 Access	2	8	4
TPL4 Alarm	0	15	4
TPL4 Alarm 15/16	0	15	16
TPL4 Parking	2	8	4
TPL Parking 16 relays	2	8	16
TPL4 Lift	2	8	64
TPL4 D4 Access	4	16	8
TPL4 D4 Alarm	4	16	8
TPL4 D4 Alarm 16/8	4	16	8
TPL4 D4 Parking	4	16	8
TPL4 D4 Parking 16 relays	4	8	16
TPL4 D4 Lift	4	8	64
OPEN/NSL4	2	4	3
DS200 (DS216)	0	24	16

Controller Type	Readers	Inputs	Outputs
MEGA4 Access	2	4	8
MEGA4 Parking	2	4	8
MEGA4 Lift	2	8	64
MEGA4-D4 Access	4	16	8
MEGA4-D4 Parking	4	16	8
MEGA4-D4 Lift	4	16	64
TPL4-DR Access	2	12	4
TPL4-DR Parking	2	12	4
TPL4-DR Lift	2	12	52
TPL4-D4-DR Access	4	12	4
TPL4-D4-DR Parking	4	12	4
TPL4-D4-DR Lift	4	12	52

14.2.2 CONTROLLER FIRMWARE VERSIONS FOR DIFFERENT DOOR/READER CONFIGURATIONS

Controller Type	Readers	Doors	Firmware Version
TPL4	4	2	5...
TPL4 D4	4	4	6...
TPL4 4 Din Rail	4	2	5...
TPL4 4 D4 Din Rail	4	4	6...
Mega 4	4	2	8...
Mega 4 D4	4	4	9...

14.2.3 CONTROLLER MEMORY CAPACITY

The following capacities apply to different types of Controller.

Controller type	Daily Programs	Weekly Programs (Events)	Weekly Programs (Alarms)	Holidays	Lift programs, Local/Network reflexes
MEGA	255	127	127	60x3	255
TPL4 / TPL4D4 / TPL-DR / OPEN4	99	32	80	60x3	99
DS216	99	-	80	60x3	99

14.3 TYPES OF ACTIONS WITH PARAMETERS

The following Actions are available in the *Event Handling/Actions* screen

Action type	First parameter	Second parameter
Relay Actions		
Relay Activation	Output – Select from list of all Outputs	- Return to Automatic Mode - NORMAL - Activated during: Delay (sec) - Always activated - constant ON - Never activated - constant OFF

Action type	First parameter	Second parameter
Relay Group Activation	Output Group – Select from list of all Output Groups	- Return to Automatic Mode - NORMAL - Activated during: Delay (sec) - Always activated - constant ON - Never activated - constant OFF
Network Door Open	Controller Network – opens all doors that are defined as Door relays in 'Reader' screen – Select 'All' or specific Controller Network from list of all Networks	- Return to Automatic Mode - NORMAL - Activated during: Delay (sec) - Always activated - constant ON
Alarms		
Input Group Deactivation During …	Input Group – Select from list of all Input Groups	- Deactivated during X (Sec) - Deactivated during X (Min) - Constantly deactivated - Cancel previous delay of deactivation - Deactivate until next time zone
Input Group Activation During …	Input Group – Select from list of all Input Groups	- Activated during X (Sec) - Activated during X (Min) - Constantly Activated - Cancel previous delay of activation - Activate until next time zone
Simulate an input	Input – Select from list of all Inputs	- Duration (x200msec)
User Interface		
Display a Message on PC	Message (see *Dynamic Text in Messages*)	Computer
Play a sound	Choose a sound file	Computer
Open a screen	Select a screen	Computer
Execute external application	Command line (see *Dynamic Text in Messages*)	[...] opens file selection window to choose an application
Reports		
Print existing report	Report (.rpx) [...] opens file selection window to choose a report	
Preview existing report	Report (.rpx) [...] opens file selection window to choose a report	Computer
Export existing report	Report (.rpx) [...] opens file selection window to choose a report	Filename / Export format
Cardholders		
Invalidate cardholder	Cardholder: Select the cardholder to be processed. Otherwise, '>cardholder' or '>escort' selects the cardholder or escort who triggered the reflex containing this Action by an 'Access granted' or 'Access denied' transaction	Expiration Type: - Permanently or - Visitor only
Validate cardholder	Cardholder: Select the cardholder to be processed. Otherwise, '>cardholder' or '>escort' selects the cardholder or escort who triggered the reflex containing this Action by an 'Access granted' or 'Access denied' transaction	Expiration Type: - Permanently or - Visitor only until end of the day
Import cardholders	Select a profile	
Databases		
Save database	Save as… (see *Dynamic Text in Messages)*	
Save journal (Only when using 'Access' database)	Save as… (see *Dynamic Text in Messages)*	
Create new journal (clean) (Only when using 'Access' database)	Save as…	

Action type	First parameter	Second parameter
Communications		
Resume polling		
Stop polling		
Send message to communication port	Communication settings	Command line (see *Dynamic Text in Messages)*
Connect distant network and read transactions	Controller network	
Modules		
Reset parking zones	Parking zone	
Start a guard tour	Guard tour program	Guard
Counters		
Increment Counter	Counter	
Decrement Counter	Counter	
Set a counter value	Counter	Value
Others		
Display a Message on Controller	Controller	Message (see *Dynamic Text in Messages)*
Set a crisis level	Crisis level	
Insert Comment in Journal	Message (see *Dynamic Text in Messages)*	
Print a message	Message Text	Use printer settings in report: [...] opens file selection window to choose a report
Pause	Pause duration (seconds)	
Send Email	To:	Message (and can use [...] to select an Attachment)
Video		
Display live video	Camera	Computer
Record video	Camera	Message (see *Dynamic Text in Messages*)
Send message to OnSSI server	DVR	Message Text

14.4 CUSTOMIZING THE CARDHOLDER INFORMATION DISPLAYED IN THE DISPLAY PHOTO SCREEN

In addition to displaying the cardholder's photo, the Display Photo screen also displays a user-modifiable list of cardholder data. The default settings for this display are set in the file 'dispalyphoto.xml, which can be found in the Application directory.

Entries in this file are in made up as follows:

<reports>

<templatename = "rptCardholders" screen "frmCardholder">

Data fields (41 entries)

<fieldname>="Field Name" caption="Caption" type= 'Type' displayed= "displayparam" />

</template>

<fontsize="n"/>

</reports>

fieldname

The following database fields are listed in the file and are available to be displayed:

EmpName	Last_Name	First_Name	Num
Company	DPT_Name	AG_Name	Code
Car_Num	Crdhld_ID	Street	City
Zip	Private_Phone	Office_Phone	Caption
WP_Name	Pers_CL	Pin	Start_Date
TO_Date	Valid	KeepCard	APB_Priv
HOL_Priv	FirstAPB	Accpt_Priv	Escort
myDescr	myPhoto	Lift_Name	ZoneID_Name
Loc_Date	Reader_Name	APBLVL_Name	myfree_field1
myfree_field2	myfree_field3	myfree_field4	NumBadgeGiven
LastDateBadgeGiven			

caption

Defines the caption to be used for each field

type

"Text" | "Number" | "Date" | "Boolean"

displayed

"1" = display this field. "0" = do not display

14.5 DYNAMIC TEXT IN MESSAGES

Filename, Date and Time

The name of the saved file can contain the time and date when the file was saved by adding <DT> (time and date) or <D> (date only) to the name of the file.

Variables (these are updated when a Global Reflex is invoked)

- Cardholder Name (%c)
- Reader Name (%r)
- Input Name (%i)
- Log Date (%d)
- Log transaction type (%t)
- Full description like in log (%f).

14.6 SETTING UP BADGE FORMATS FOR WIEGAND BADGES

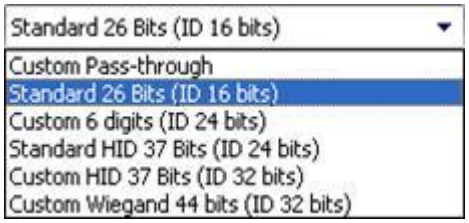
When Wiegand technology is selected in the *Reader/General* screen, different formats may be selected in the *Reader/Miscellaneous/Badge Format* screen.

Many standards exist on the market. DDS controllers may read up to 50 bits Wiegand badges (Wiegand codes are read in a binary format), within 48 bits of data (12 hexadecimal digits) and 2 parity bits, as follows:

```
E b47 ……. b b b b0 O
```

Where: b47 … b0 = 48 bits of data maximum (may be less) and E,O = 2 parity bits

The following options are supported:


Standard 26 Bits (ID 16 bits)
Custom Pass-through
Standard 26 Bits (ID 16 bits)
Custom 6 digits (ID 24 bits)
Standard HID 37 Bits (ID 24 bits)
Custom HID 37 Bits (ID 32 bits)
Custom Wiegand 44 bits (ID 32 bits)

14.6.1 STANDARD 26 BITS (ID 16 BITS) (HEXADECIMAL):

This is the default format. The system uses the 32 least significant bits of the data string (b31…b0Hex, i.e. the last 8 digits of the code) as the 'card code'.

Two parity bits are added to the card besides the badge code to confirm correct reading. Most Wiegand standards use a similar algorithm to calculate these parity bits and this algorithm has been integrated into the DDS controllers. It is thus preferable to use it by selecting the corresponding jumpers on the controllers' electronic card.

However, certain card standards have original algorithms for the calculation of the parity bits. In order to enable these controllers to read these badges, the jumper position "no parity bits" must be selected. (See the controller installation manual for further details).

14.6.2 WIEGAND 44:

'Wiegand 44' format is a particular format of 44 bits, which includes 40 bits of data (10 hexadecimal digits) and 4 parity bits, as follows:

```
b43 ……. b4 b3 b2 b1 b0
```

Where: b43 … b4 = 40 bits of data and b3 … b0 = 4 parity bits.

In this format, the system keeps as the 'card code' the 32 least significant bits of the data string (b35…b4), in other words the last 8 digits of the code, which may be hexadecimal.

14.6.3 DECIMAL:

This is a particular format, where badge code consists of a 5-digit decimal number (generally printed on the badge) sometimes associated with a 3-digit decimal code site. Application controllers may read a 50-bit Wiegand string as in the hexadecimal format but convert the information to decimal as follows:

```
E b47 ……. b b b b0 O
```

Where: b15 … b0 = 16 bits for 'card code', b23 … b16 = 8 bits for 'site code' and E,O = 2 parity bits.

In this format, the system keeps as the 'card code' the 16 least significant bits of the data string (b15…b0), in other words the last 4 hexadecimal digits of the code, and converts them into a 5-digit decimal number, which is the unique code which identifies the card. In addition, the system converts the 8 previous bits of the data string (b23…b16), in other words the 2 previous hexadecimal digits of the code, into a 3-digit decimal number which may be used as a 'site code', i.e. an identical code for all the cards of the site.

If this site code has not to be checked, leave '0' in the 'Customer code length' field.

If this code has to be checked (and therefore is present in all the cards of the site), select the value '3' in this field and type the 3-digit code in the 'Customer code value' field.

For example: If the Wiegand hexadecimal code is h12AB08, the site code is 018 (the decimal value of h12) and the Card code is 00043784 (the decimal value of hAB08).

14.6.4 DECIMAL 24 BITS:

In this format, Application controllers may read up to 50 bits Wiegand string and convert it in two decimal numbers as per the 'Decimal' format but the 3-digit site code is added to the first 5-digit code. The 3-digit Site code may or may not be checked as per the 'Decimal' format.

For example: If the Wiegand hexadecimal code is 12AB08, the site code is 018 (the decimal value of h12) and the Card code is 01843784 (43784 is the decimal value of hAB08).

Link to White paper on Wiegand Card Format:

http://www.hidglobal.com/documents/understandCardDataFormats_wp_en.pdf

14.7 SETTING UP BIOMETRIC READERS

1. Each biometric reader is connected to the system via 2 links simultaneously:
   - From its Wiegand_OUT to the controller Wiegand_IN (to send the cardholder code),
   - From its communication port (Host or Aux) to the PC (to receive configuration and templates).
2. In the "Controller Network" screen, define the network on which the biometric reader is connected. For TCP network, port 10001 must be used; this means that the TCP/RS485 interface must be configured with the port 10001.
   Caution: With a BioPass reader type, the "Waiting Delay" parameter of the network must be at least 500 msec.
3. In the *Tools/Options/Communication* screen, select the Bioscrypt readers Baud rate. On a regular network, this baud rate can be different from the controller's baud rate. By default, the baud rate of the DDS biometric readers is 38400 bauds. This is the default value indicated in the Options screen too.
4. In the *Controller/General* screen, select the controller on which the biometric reader is connected. Click on the 'Reader' tab, and open the *Reader/General* screen of the corresponding reader. In the 'Technology' field, choose 'Wiegand' and in the 'Biometrics' field, select the required biometric reader type (the reader type is written at the back of the reader).
   - For BioFlex readers with keypad, select the 'Wiegand Keypad' Technology.
   - For BioSmart readers, select 'Bio Smart Card'.

   Information: It is recommended to give a reader name that includes the word 'bio' (e.g. 'Bio Rdr1') to make the identification and future searches easy.
5. Click on the *Reader/Miscellaneous/Badge format* screen and select the badge format according to the cards in use. For BioPass readers (not using badges) and BioFlex readers with keypad, select the 'Decimal' Format.
   Caution: When several readers are defined with the same technology, they must have the same badge format. If some readers need a different format, their technology must be different (i.e. 'Wiegand 2') and they must be connected on a different controller.
6. Click the *Reader/Finger Print* tab and configure the current biometric reader by specifying the Reader communication network and the reader address (written on the back of the reader). Specify if the reader also serves for enrollment and set the Bio Wiegand format. For BioPass readers and BioFlex readers with keypad, select the 'Standard 26 bits'.

For BioSmart, for allowing two fingerprints per card, press 'Bio Smart Settings' button and set the 'Rx templates timeout' to 1500ms.

Caution: On any given controller, all readers must be identical regarding the three following points: Technology, Badge format, Bio Wiegand format.

7. Test the communication by opening the *Communication/Diagnostic* screen ('F8' function key): click on the 'Biometric readers' button, on the right top of the screen, then on the '+' symbol located to the left of the network name. Highlight the biometric reader created previously. A **'V'** displayed next to the reader name indicates that communication is established. The reader name with its address and memory usage is displayed to the right.

14.8 'CUSTOM' BIO WIEGAND FORMAT

Each template needs to be downloaded to the biometric readers with an identification number (Called "Bio ID" or "Bio template ID"), which identifies the person. This Bio ID depends on the Bio Wiegand format defined (similar to the way the card code depends on the Badge format defined).

The Bio template Id is normally automatically computed by the system from the card code, based on the Badge format (defined in the *Reader/Miscellaneous/Badge format* tab) and the Bio Wiegand format (defined in the *Reader/Finger Print* tab). For example, the 'Standard 26 bits' Bio Wiegand format calculates the Bio ID from the 4 last digits of the card code.

Basing the Bio template ID on the last 4 digits can cause problems, as 2 badges could have the same 4 last digits, as can happen with large badge populations or with sets of cards from different suppliers. If there are two badges with the same last 4 digits (for example 561234 and 781234), they would be allocated the same Bio ID. To prevent this risk of duplicates, there are 'Custom' formats which allow the site to define a custom Bio ID computation.

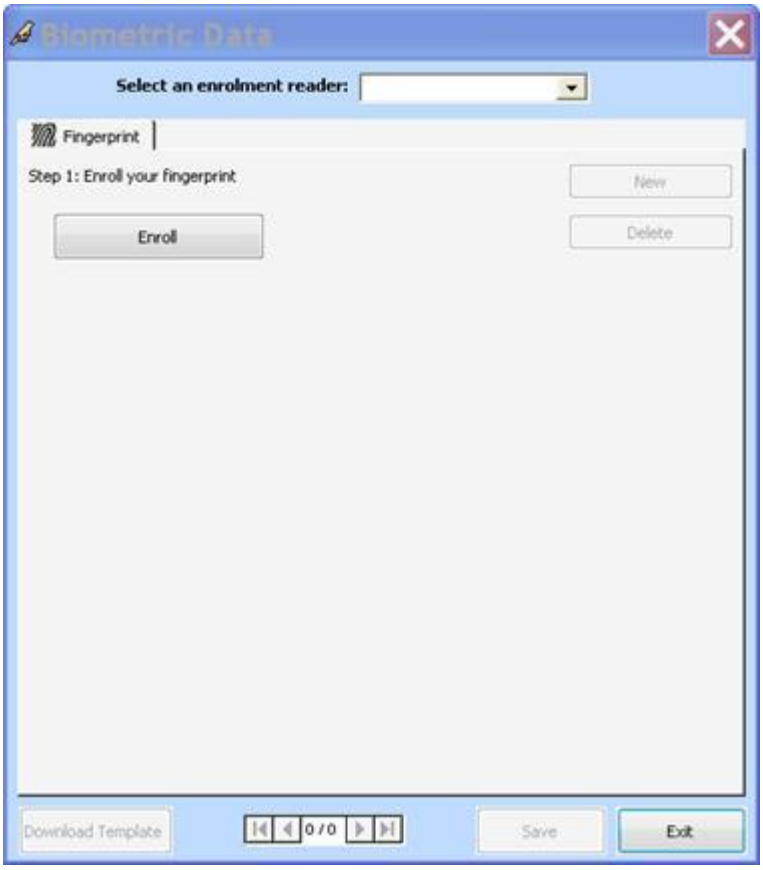
14.9 ENROLLING A CARDHOLDER USING A BIOMETRIC READER

1. In the *Parameter/All Cardholders/General* screen, click on the 'Create new' button to create a cardholder and define his access authorization. **Save** the record.

2. From the *Parameter/All Cardholders/General* screen of this cardholder, press the 'Biometrics data' button.

Biometrics Data Button

Opens Biometric Data screen



Select a bio reader that is defined as an enrolment reader

Select the required enrolment reader from the list. If the reader is BioSmart, click on 'Read Smart Card', present an empty card and click on 'New'.

Press the 'Enroll' button for a fingerprint enrolment. Follow the instructions displayed at the screen. Once the enrolment is finished, an image of the fingerprint template is displayed on the screen with a note evaluating the quality and the information content of the fingerprint. This rating is satisfactory, though the quality> 50 (3 blue stars) and if the content> 70 (4 blue stars). If this is not the case, the user must re-enrol the finger (or another finger) by pressing the button "Enrol". Specify which finger has been enrolled and save.

After the template data has been received by the readers, the "Save" button is greyed out. If the reader is BioSmart present the card to save the template on the card.

New

Used to add data from an additional finger - not normally used, unless more than one finger must be recorded for the same person.

Where planning to record multiple fingers, keep in mind the limit of templates that can be held in the reader.

Delete

Deletes the selected template

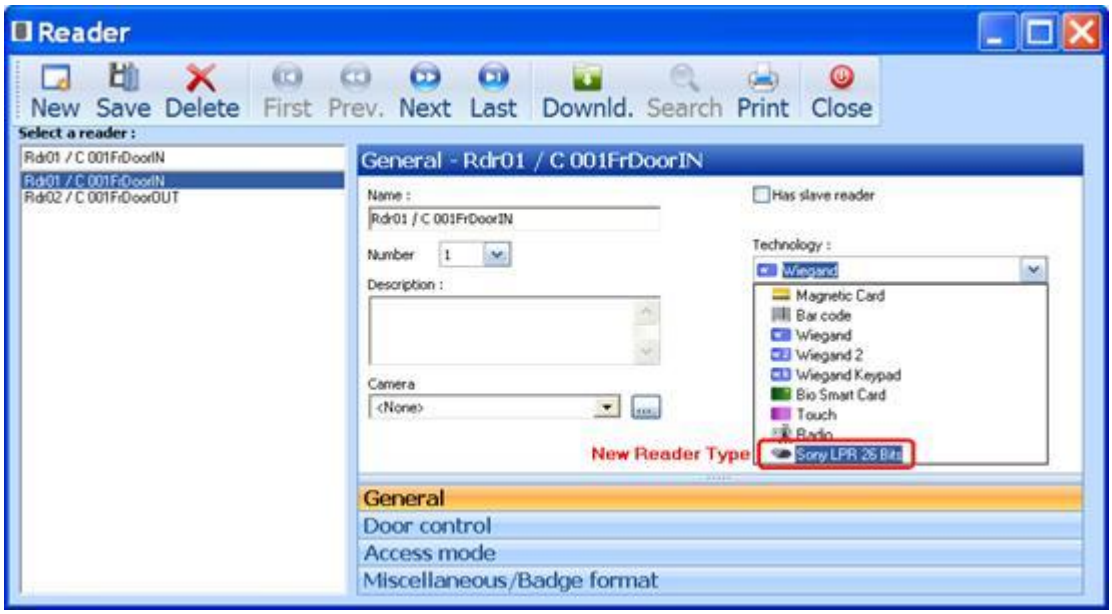
14.10 SUPPORT FOR SONY LICENSE PLATE RECOGNITION (LPR)

In order to use the LPR module, it must be licensed in the dongle, and the ini file entry *LPRType* = 1 must be set.

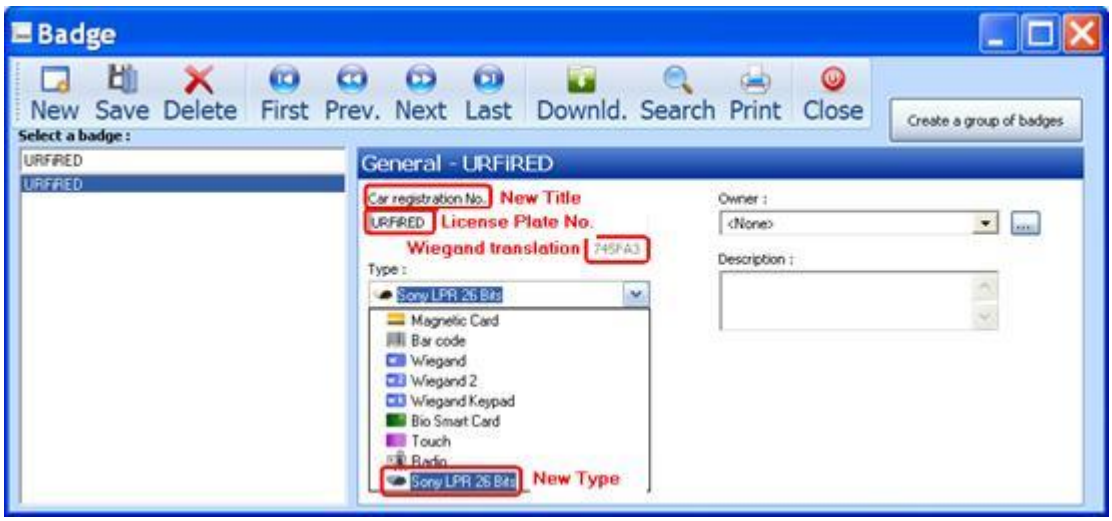
The camera reads the plate and the SONY software uses a unique algorithm to convert the number-plate code to a Wiegand code. The algorithm is integrated into the Application, so the user can just type in the vehicle's license plate number into the Badge code.

The affected screens are the Reader, Badge and Options/General screens – see images below.

Reader/General screen



Parameter/Badge screen



New entry in *Tools/Options/General* List

15 SYSTEM .INI FILE

15.1 INTRODUCTION

This section details all <Application>.ini file entries for the Application version 2.2.000. Most of these entries are included in the *Tools/Options* screens of the application, but these screens do not contain all of them.

If changes are made to entries in the *Tools/Options* screens, then on clicking **OK** the ini file is re-built according to the current definitions.

To change any entry of the ini file, open the <Application>.ini file located in the application folder, with Notepad. The .ini file is structured in categories, indicated with **[ ]** symbols. Search for the required entry in the corresponding category.

Unless additional values are specified, setting an option is done by manually setting the value of the corresponding entry to '1', and disabling an option is done by setting the value to '0'. When all changes are done, save the ini file and restart the Application.

> Note: Changes are only recognized after restarting the application, as the .ini file is only read at program start.

15.2 <APPLICATION>.INI ENTRIES

[Background]

- **Background File Name**: Graphic file of application background; the file should be located in the application folder.
- **Background Stretch**: if =1, the application background image is stretched.

[Database]

- **DbsFolder**: Full path of main application folder on the Application server machine.
- **DBType**: if =1, the application database is MS-Access type, if =2, the database is MS-SQL type (requires SQL module on the Dongle).
- **SQL_Connect**: Connection string to main SQL database
- **SQL_Connect_Backup**: Connection string to alternative SQL database (see also the notes regarding the entries *AutoFailover, SwapPrimaryDB* and *ServerRedundancy*).
- **SQLRestoreTimeout**: Time out (seconds) when attempting to restore a saved SQL database under the Application from .bak file or when deleting old events. Note that the default value of 600 (i.e., 10 minutes) is not enough when the history contains more 700k events (approx.).
- **DatabaseTimeout**: Timeout used when executing view queries into SQL. If =0, the Application waits for the end of the query execution without time limit.
- **AutoFailover**: if =1, when connection to the main database is lost, the Application automatically switches to the alternative SQL database.
- **SwapPrimaryDB**: 5min by default (range 1-1440). Frequency (in minutes) in which the Application checks whether the main database is operational again when the alternative SQL database defined at SQL_Connect_Backup option is in use.
- **WaitDBcancel**: if =1, the 'Cancel' button is displayed on the little screen which appears when the database is not found or when the workstation cannot see the server. Since these screens wait for the database or the server, clicking 'Cancel' in fact prevents the application from starting. So setting this entry to 0 avoids user mistake on sites where the auto start of the Application is critical.
- **NetHasp**: if =1, the license dongle is of special kind (called 'NetHasp', its physical color is red) that may be installed on any PC on the LAN. That PC should run the Aladdin utility 'License Manager'. Such dongle can be used, for instance, in Terminal-Server environment. On such environment users may run the Application each time

from a different terminal client while leaving the dongle connected to one specific machine.

- **SQLServerDateFormat**: Date/time format (i.e. yyyy\-mm\-dd hh\:nn\:ss) to use when saving date related records in the SQL database. SQL date/time settings may be different according to Windows regional settings and/or user preferences during SQL Server installation. User should edit the value of this entry according to the format used on their SQL Server. Consult the system SQL administrator. This entry is used when the entry MotorComNet=0 only.
- **SQLServerDateFormatNet**: Same as above when the entry MotorComNet=1.

[Communications]

- **IsWS**: if =1, the Application works as Workstation. If =0, the Application works as Server.
- **myServerName**: PC name of the server to which this workstation belongs. This entry is mandatory for workstations when using the Application in a MultiServer/MultiPolling installation in Multi Site installation (when the entries Multi-site=1).
- **DontCreateConf**: if =1, the Application does NOT recreate the Spread configuration file (Spread.conf) on each startup. If =0, this file is re-built at startup with the data defined in the Computer screen.
- **SpreadDeamon**: =4803@localhost, by default. Allows connecting to distant spread.exe (i.e. spread application located on the server). 4803 is the port used and localhost is the current PC, that can be changed either with IP address of the PC or with the PC name (i.e. 4803@192.168.168.141 or 4803@SERVER).
- **SpreadTestEvery:** 60sec by default (range 1-3600). Frequency (in seconds) in which the Server/Workstation checks its connection to the Spread daemon. If the Application fails, it signals a flag that communication had failed. If this is a Workstation, once TestMinute function is called, it brings up a modal screen, which displays that the server is disconnected. In all cases if connection is lost, AME message appears. The option 'SpreadReconnect' does not influence the functionality of this feature.
- **SpreadTestTimeout**: 5sec by default (range 1-20). Timeout (in seconds) in which the Server/Workstation checks its connection to the Spread daemon. Server/Workstation sends Server with Daemon a "Hi" message and waits for a "Bye" answer.
- **SpreadMulticast**: if =239.0.0.60:4803, the broadcast mode of the Spread is disabled. By default, this entry is empty allowing the Spread working on the Spread_Segment defined at the Subnet Mask field of the Computer screen. If filled, this entry should be filled for all PC of the installation. The advantage of using Multicast on broadcast was due to the fact that on certain system Tibbo would get confused from the broadcast communication.
- **SpreadGroup**: Virtual PC name for 'Cluster' environment. By default, this entry is empty. When one or more PC are seen from the outside world as one virtual PC (i.e. ADMIN), the Computer screen should contain the name of all the PC including the virtual PC (it requires a Workstation license for each one in the Application dongle). In addition, on each PC, this entry should have the name of the virtual PC (i.e. SpreadGroup = ADMIN).
- **CloseSpreadonExit**: = 1 by default, for kill the spread.exe process on application exit.
- **DoPolling**: = 1 by default, for starting controllers polling on application start.
- **NbRetry**: Number of retries to resend the data in case the controller does not answer to a command. Either polling or data download.
- **GAPNbRetry**: Number of times to resend the Global Anti Passback commands. When Global Anti Passback is managed by the application (i.e., when entry GlobalAPBwoPC=0), controllers does not answer to the Global Anti Passback commands because these commands are broadcasted.

- **Daily Program 4 Zones**: if =1, each daily program can have up to 4 active ('green') periods. If =0, up to 2 active periods only.
- **SpecialDays**: if =1, application has three holiday types: Holiday, Special Day 1, Special Day 2. Weekly programs consist of 7 weekdays + holiday + two special days. If =0, only one holiday type.
- **Show Commands**: if =1, the commands to the controller(s) are shown on the main screen event log.
- **ComErrorSeconds**: Duration (seconds) since the first detection of communication error with a controller till changing the polling icon on the main toolbar to red X.
- **Com_PollingPriorityDuringDownload**: range: 1 - 10. Number of polling commands sent between two definition parameters commands. Obviously, the definitions download process slows down as much as the value is higher. To ensure at least one polling command to each controller between two download commands, the value should be equal to the number of controllers in the largest controller network in the system, if not refreshing input/output status in the background (i.e., when entry NoIO=1). If refreshing IO status (i.e., when entry NoIO=0), multiply this value by 3.
- **Com_DownloadEmployeeDuringProcessing**: if=1, on controller initialization, downloading all cardholders' definitions starts, simultaneously whilst preparing the commands in the PC RAM. If =0, updating the controllers starts only after preparing all the commands in the PC RAM.
- **MotorComNet**: if =1, the communication DLL file (UC.dll) developed on VB.NET is used allowing to free the Application GUI even during heavy communication consuming operations such as: importing large HR files, controllers initializations, reading thousands of events. Also the Application can start normally and run freely while many controllers are not communicating at all (supported only with VB.NET enhancement using the setup file: UCDotNet_Setup.exe). Please contact us before setting this entry.
- **MotorComDebugLevel**: if =1 or 3, when the entry MotorComNet=1, debug information is written on the DBMON.exe application (the value '3' is the highest level). If =0, no information is written.
- **Graphic+**: if=1, support for Graphic plus module (required G+ on dongle or in DEMO mode, Microsoft .Net framework and G+ setup file: graphic_plus_setup.exe).
- **EventModeKeepAliveYesNo**: if =1, the Application will close and reopen the communication port used for second Alarm Priority buses, with the frequency specified at EventModeKeepAlive entry. This is especially important when the connection is TCP, since the TCP socket might be shut down automatically after a certain period of communication silence.
- **EventModeKeepAlive**: Frequency (in seconds) in which to close & reopen the communication port for second Alarm Priority busses, when the entry EventModeKeepAliveYesNo=1.
- **SwapBackDelay**: Frequency (in minutes) in which the Application checks whether the main bus is back to live when a second bus is used as a redundant communication bus. After a communication error on the main bus, the Application swaps immediately to the second bus and waits this delay to check via which bus it can talk to more controllers.
- **Minilock**: if =1, support for Minilock controllers (relay commands are sent with command 10 instead of command 40). It is recommended to use only if one of the controllers is Minilock. In this case, do not use '4 states' inputs and set the entry OldRelayCmd=1.
- **Resent Definition on Deny**: if =1, when a cardholder is denied, the Application immediately downloads his/her definition to the controller. During controller initialization, some cardholders can be denied. By sending immediately updates to the controller, another pass attempt would be successful.
- **NoIO**: if =1, automatic refresh of the inputs/outputs status is disabled in the Active Alarm screen in order to save controller communication time. This setting is

recommended in large installations. Manual refresh is still possible with the 'Refresh' button on the Active Alarm screen toolbar.

- **Lift per Reader**: if =1, the screen 'Lift Authorization Group' is enabled, allowing to define different Lift Program for each reader of a same Lift controllers. If =0, cardholder can only activate one 'Lift Program' for a Lift controller, no matter which one of its readers he used.
- **DoorOpenByMinute**: Future use. Not supported by hardware yet.
- **OldRelayCmd**: if =1, support for old controllers (having firmware before the year 2000). It is recommended to use only if one of the controllers is old. Please contact us before setting this entry. When this entry is set, old relay commands are sent (10 instead of 40), no special days commands (76) and no crisis level commands (0E) are sent, new 'Input Group' actions are not supported.
- **RelayAsync**: if =1, when using actions for activating relays, no feedback is expected, thus preventing the possibility to stuck the application when two or more operations involving communication take place simultaneously. E.g., 'Activate relay' during Cardholder Import.
- **RelayAsyncImmediate**: if =1, any relay command is executed almost immediately, right after the current command, instead of after all the existing commands of the operational queue (e.g., initializing a controller with thousands of cardholders). This setting ensures the immediate execution of the relay action, but contain the risk of inverting the designed order. E.g., when a process contains two successive actions: 'relay on' then 'relay off', the program might randomly reverse the order and leave the relay on. Therefore, if the order is critical, this entry should be disabled.
- **ResetTibbo**: if =1, when one or more controllers using TCP networks do not answer, the Application sends a reset command to the Tibbo TCP converter.
- **Resend Pendings**: Frequency (in minutes) of sending the pending commands to controllers. The pending commands are commands that were not received by controllers due to communication error or other problems.
- **Validation Cardholders**: Frequency (in minutes) when the Application scans the cardholder database to see whether there are cardholders that need to be added/deleted from controllers in accordance with cardholders' time related definitions (From date / To date / Scheduled AG / Exceptions).
- **WaitFirstPing**: Duration (in seconds) from the first detection of communication problems till testing the TCP socket via PING command, when one or more controllers using TCP networks do not answer. If the PING fails, the Application won't try to reach to the controller itself.
- **WaitNextPing**: Duration (in seconds) between PING commands, when one or more controllers using TCP networks do not answer and when TCP socket did not answer to the first PING.
- **Ping Timeout**: Timeout (in milliseconds) in which the Application waits for an answer to a PING command, when one or more controllers using TCP networks do not answer.
- **Controller Second**: if =1, all events reported by controllers include also seconds (controllers need to be initialized after changing the value of this entry). Supported by controllers having firmware later than 01/06/2004. Not supported by NSL controllers.
- **AlarmZones**: if =1, support for allocating weekly program to input groups. An option to select input groups is displayed in the 'Event handling program>Alarms' screen. In case of conflict, the individual input weekly program definition prevails. This entry should be set to '1' when using 'Input Group Activation/Deactivation during…' actions and/or Alarm keypad/LCD (RP128) reader.
- **ControllerInputGroup**: if =1, support for Input Group commands (43). This entry should be set to '1' when using 'Input Group Activation/Deactivation during…' actions and/or Alarm keypad/LCD (RP128) reader.

- **SkipCheckTables**: if =1, will not check if the database should be updated at the application start. This option is not recommended. Please contact us before setting this entry.
- **Refresh IO Period**: Frequency (in milliseconds) of refreshing the inputs/outputs status, when the entry NoIO=0.
- **SleepingDelay**: Minimum duration (in milliseconds) between sending of two successive commands. This entry affects the whole communication process thus should not exceed a value of about 3ms (unless directed otherwise by the manufacturer). Note that the 'Waiting Delay' option in the 'Controller Network' screen, defines the delay between two polling commands (including refresh input/output status) for each individual controller network, while this entry concerns both polling / refresh I/O as well as other commands for the whole system.
- **Allow57k**: if =1, allow using the baud rates: 57600 and 115200 bps. Note that these baud rates are supported on all MEGA and on TPL controllers having firmware version dated 02/07/04 and later.
- **Baud Rate**: range: 0 – 4. Controller communication baud rate (0 for 4800; 1 for 9600; 2 for 19200; 3 for 38400; 4 for 57600).
- **Baud Rate Biometrics**: range: 0 – 4. Biometrics reader communication baud rate (0 for 4800; 1 for 9600; 2 for 19200; 3 for 38400; 4 for 57600).
- **BiometricOptimize**: if =1, fingerprints are sent only to the relevant biometrics readers according to the access group definitions. If =0, all the fingerprints are sent to all active biometrics readers.
- **DisableDesign**: if =1, report layouts designing is disabled (the 'design' tab of the report preview is hidden).
- **WoSetBaudRate**: if =1, the Application never sends a command to switch to the current baud rate, when creating a new controller or when activating a non-active one.

[Parking]

- **Auto Reset**: if =1, all the parking lots are automatically cleared at the time given by the entries 'Reset Hour' and 'Reset Minute'.
- **Reset Hour**: Hour of the parking lots auto reset, when the entry Auto Reset=1.
- **Reset Minute**: Minute of the parking lots auto reset, when the entry Auto Reset=1.

[Log]

- **View Log Windows At Startup**: if =1, the real time event log is shown on the application main screen on the Application start.
- **Log Windows Height**: Height of the real-time event log window.
- **Log Windows Width**: Width of the real-time event log window.
- **Log Windows Top**: Top position of the real-time event log window on the main screen.
- **Log Windows Left**: Left position of the real-time event log window on the main screen.
- **NewLog**: if =1, the event log runs as Rich log, RTF text allowing to show camera icons for relevant event and right click options. However, copying text is not possible. If =0, the event log runs as Simple log, a simple text allowing copying with [Ctrl]+[C] keys.
- **ScrollLogs**: if =1, after writing new event, the event log cursor returns to its previous location in the log text allowing the user to read the log text while getting new events. If =0, the event log cursor auto jumps to the end of the log text every time a new event is received.
- **LogScrollControl**: if =1, a control button is displayed just above the top left side of the event log window allowing to set on/off scrolling of the event log. Note that the entry ScrollLogs controls the default scroll status on application start only.

- **LogInsertEventsControl**: if =1, a control button is displayed just above the top right side of the event log window allowing to set on/off displaying newly received events on the event log.
- **2Logs**: if =1, the event log window is divided into two windows: one for access events, the other for alarms instead of having both access & alarm events on the same window.
- **LogOptimized**: if =1, newly received events are not added at the end of the log text but wherever the cursor is, allowing to save processing time when a large amount of events is received in a very short time. However, it may be confusing to the user: if clicking in the middle of the log text when new event is coming, the data is written in the middle, thus 'pushing' the half of the old text downwards. Therefore this value is suggested only on unmanned PCs.
- **LogCleanFrequency**: Frequency (in transactions number) in which the Application checks for event log clean up. By default each 100 transactions, the application checks if the log text has reached the maximum value specified for the entry LogMaxCharacters (if the entry NewLog=0) or LogMaxLines (if the entry NewLog=1). Note that reducing this value can have a negative effect on the application performance.
- **LogMaxCharacters**: If the entry NewLog=0, maximum number of characters stored in the event log (1 event is about 100 characters) before cleaning the first part of the log text, leaving therefore the latest events. The number of erased characters is defined in the entry LogEraseCharacters.
- **LogEraseCharacters**: If the entry NewLog=0, number of characters to erase (1 event is about 100 characters) when the log text has reached the maximum number of characters defined in the entry LogMaxCharacters.
- **LogMaxLines**: If the entry NewLog=1, maximum number of lines stored in the event log before cleaning the first part of the log text, leaving therefore the latest events. The number of erased lines is defined in the entry LogEraseLines.
- **LogEraseLines**: If the entry NewLog=1, number of lines to erase when the log text has reached the maximum number of lines defined in the entry LogMaxLines.
- **DisplayAndSaveOnlyGrantWithPin**: if =1, Access Granted events are stored and displayed on the log screen only if the cardholder has presented both badge+PIN code. The reader definition should have the options 'With Card AND Keypad' and 'Door Controlled'.
- **Process_DisplayImageAndText**: if =1, when adding process buttons to the main toolbar, the process name is displayed next to the icon. If =0, the process name is not displayed allowing more place on the toolbar. The tool tip text of the button contains the process name or the process description when it is filled.

[ActiveAlarm]

- **ActiveAlarm_IconWithoutLabel**: if =1, when the entry Graphic+=0, icons on the active alarm maps are shown with text label containing their name. If =0, icons are shown without any text label.
- **ActiveAlarm_IconSize**: if =16, when the entry Graphic+=0, icons size on the active alarm maps is 16X16 pixels. If =32, icons size is 32X32 pixels.
- **BalloonToolTips**: if =1, when the entry Graphic+=0, balloon shaped tool tips are shown when moving the mouse over the icons on the active alarm map.
- **AlarmSoundInterval**: 25sec by default. Duration (in seconds) between sounds of "OnAlarm.wav".

[Time and Attendance]

- **TA+**: if=1, support for Time&Attendance plus module (required T+ on dongle or in DEMO mode).
- **TA_Correction**: Maximum delay (in seconds). In Time & Attendance plus module (i.e., when entry TA+=1), if two successive transactions are from the same reader

and the same cardholder, only the second one will be taken into account (i.e. the first one will be ignored) if the delay between the two transactions is less than this 'correction' delay. This feature allows a cardholder to immediately re-punch if he discovers that his first transaction was wrong.

- **TA_LateArrivalCountBeforeShift**: if=1, in Time & Attendance plus module (i.e., when entry TA+=1), the report of late arrival cardholders (i.e. arrived later than the scheduled entrance time (+ the grace delay) in their Personal Contract) will also include cardholders who arrived before their scheduled entrance time, leaved and then came back later than the start of their shift.
- **TA_MaxGraceInMinutes**: 20min by default. Maximum value (in minutes) allowed for the Grace period when creating Daily Shift in Time & Attendance plus module (i.e., when entry TA+=1).

[Language]

- **Language**: Application language. The available values are ARA (Arabic), CAT (Catalan), CL (Spanish-Chile), DEU (German), EN (English), ES (Spanish-Spain), FIN (Finnish), FR (French), GRK (Greek), HEB (Hebrew), HGR (Hungarian), KOR (Korean) (Not translated yet), NL (Dutch), PL (Polish), POR (Portuguese), RU (Russian), SIC (Chinese simplified), SK (Slovak), SWE (Swedish), TUR (Turkish).

[Font]

- **FontName**: Application font
- **CharSet**: The character set relevant for the selected language. It is needed since the application menu does not use Unicode. The available values are 0 (ENGLISH, FRENCH), 136 (CHINESE), 161 (GREEK), 162 (TURKISH), 163 (VIETNAMESE), 177 (HEBREW), 178 (ARABIC), 186 (BALTIC), 204 (RUSSIAN), 222 (THAI), 238 (EASTEUROPE). Windows should have the local regional settings set as default.

[General]

- **KeepAliveEvery**: range: 1 – 1440. Frequency (in minutes) in which the Application writes "KeepAlive" in the AME file. In addition, in Multi Site installation (when the entries Multi-site=1), at this interval, the server also writes in the database that it is currently running for updating the Diagnostic screen (text reported that the server was alive at <date and time of last keep Alive>).
- **CheckBackupEVTEvery**: Frequency (in minutes) in which the server treats the BackupEVT files if any. These files are temporary files where events are stored in case of database disconnection. In addition, these files are also treated at each application startup and every day at 00:05.
- **FileSavingFormat**: Date format (i.e. ddmmmyyyy) to use for AME, database and Journal files name.
- **CloseWithoutMessage**: if =1, when closing the application, no confirmation message is displayed.
- **NoMessageBox**: if =1, all the Application messages that usually wait for user click on OK button are disabled in order to prevent these messages from blocking the application, when the application server is configured to run as a Windows service. This option must be set ONLY on a server that runs the application as service, without any user interface.
- **PassPass**: if =1, a checkbox 'Pass Everywhere' appears in the Cardholders screen, allowing to give access (i.e. for fire fighters) on all the doors (not depending on Access Group, Exceptions, Schedule AG). Only the Validation option is stronger. In Multi Company/Multi Site applications, only 'Super users' can see this checkbox.
- **ImportParamInSQL**: if =1, the application reads the translation strings from the Param.mdb file upon each startup. If =0, the application does not read it, saving 10-20 seconds when starting. In this case, if modifications were made to the translation

or after updating the application, the modified/new strings are not updated into the system.

- **Multi Company**: if =1, support for Multi Company application (required M on dongle).
- **Multi-site**: if =1, support for Multi Site application (required xMS on dongle). Note that it works only with database SQL type (DBType=2) and with Multiple access groups (ForceMultipleAG=1).
- **SQLReplication**: if =1, in Multi Site installation (when the entries Multi-site=1) the SQL database is replicated and the application knows that the data sent to the other servers could have a latency.
- **CheckQueueMSGEvery**: Frequency (in seconds) in which the Application server checks in the database table called QueueMSG if it has received some transactions from other servers, in Multi Site installation (when the entries Multi-site=1).
- **QueueMsgTOP**: 80 by default. Number of transactions to read in QueueMSG table in 'QueueMsgMaxTimeProcessing' seconds at each iteration defined by 'QueueMsgLoadInterval', in Multi Site installation (when the entries Multi-site=1).
- **QueueMsgLoadInterval**: 8 by default. Pause (in seconds) until the next iteration, when there are pending transaction in the QueueMSG table, in Multi Site installation (when the entries Multi-site=1). If there are no pending transaction , the next iteration will occur by the value set in **'**CheckQueueMSGEvery' option.
- **QueueMsgMaxTimeProcessing**: 1 by default. Maximum number of seconds to allow processing the QueueMSG table at each iteration defined by 'QueueMsgLoadInterval', in Multi Site installation (when the entries Multi-site=1).
- **DebugMSMQSend**: if =1, the the Application server writes in AME files all messages sent to the other servers, in Multi Site installation (when the entries Multi-site=1).
- **DebugMSMQRecv**: if =1, the the Application server writes in AME files all messages received from the other servers, in Multi Site installation (when the entries Multi-site=1).
- **HelpFile**: For special projects only. File name of a customized help file in .pdf format to open by clicking on "Help" menu. The .pdf file should have been set into the application folder previously. Note that PDF reader must be installed in order to open a PDF file.
- **woColMemNum**: if =1, at the startup the application does not upload the cardholders' details to PC RAM. This setting can save a lot of time in the Application startup, especially when using DynamicNumBadge option.
- **CardholderLoadOnSearch**: if =1, the Cardholder screen opens directly in "Search" mode, like when the "Search" button is clicked.
- **CardholderSelectTop**: Maximal number of cardholders (the first ones) to display in the Cardholder screen. This setting can save a lot of time in this screen when a lot of cardholders are managed. If =0, all the cardholders are displayed. Note that in case of search, only the first found cardholders are displayed if the result reaches the maximal value.
- **ReportFolder**: Full path of the report folder. If nothing is specified, the Application (server or workstation) uses the default folder 'Reports' under the server application folder.
- **ReportShowDeleted**: if =1, 'Door Pass' report shows also events from deleted cardholders and 'All Cardholders' report shows also the details of deleted cardholders. These reports can be filtered according to deleted people or not.
- **FileChecker**: Not used.
- **ShowErrors**: if =1, errors that application receives from Windows and which are generally saved in the AME file are displayed on main screen log (in addition to writing them on the AME file).
- **Region**: For special projects only.

[Cardholder / Visitor]

- **AllowDuplicateName**: if =1, the Application allows saving people having the same first & last name. In this mode cardholders' names are displayed along with their 'Number' (as typed in Number field on the cardholder screen). Therefore, in order to force the duplicates to have a unique Number, it is recommended to set the option CardholdersNumberUnique.
- **SavePhotoByNum**: if =1, the captured photos are saved with the cardholder Number as file name. Note that it only works if the option CardholdersNumberUnique=1. If =0, the file name is "photo" & cardholder ID & "_" & Cardholder Last Name.
- **CardholdersEraseMsg**: if =1, when deleting a cardholder, a confirmation message "Do you want to delete?" is displayed.
- **CardholdersNumberUnique**: if =1, when creating new cardholders, the system forces the user to enter a unique value in the Number field on the cardholder screen.
- **CardholderDefaultAccessGroup**: Default Access Group allocated automatically at Cardholder creation (i.e. CardholderDefaultAccessGroup = Anytime Anywhere). Note that if the Access Group does not exist, a message is written in the AME file.
- **ForceMultipleAG**: if =1, the user is forced to work with Multiple access groups only. In addition, if Simple access groups were allocated to existing cardholders, they are automatically transformed into Multiple access groups at application startup.
- **CardholderDefaultBadgePrintingLayout**: Default Badge printing layout allocated automatically at Cardholder creation (i.e. CardholderDefaultBadgePrintingLayout = badge1.rpx).
- **VisitorDefaultAccessGroup**: Same option as 'CardholderDefaultAccessGroup' at Visitor creation.
- **VisitorDefaultBadgePrintingLayout**: Same option as 'CardholderDefaultBadgePrintingLayout' at Visitor creation.
- **VisitorEndDay**: Default end time allocated automatically at Visitor creation (i.e. VisitorEndDay = 17:00). The card will be valid during the day of its creation, till the max. 30 minutes (by default) after the hour/minute specified at this entry hour.
- **CardholderSpecialSearch**: if =1, the Search function in the Cardholder screen allows searching on special characters, like the Turkish character <İ>.
- **MinCardholders**: Minimum value for the NumBadge, the cardholder unique index on the controller(s) memory. When giving a card to a cardholder, a new NumBadge (last given value + 1) is allocated to him. The cardholder NumBadge can be seen on the lower right corner of cardholder screen when pressing Shift+F12. By default, the minimum value is 1 and it should not be changed in standard installations. Only in Multi Site installations, where two or more polling servers are used, this entry (and MaxCardholders) allows to allocate each server with a different array of cardholders' indexes (E.g. Server 1: from 1 to 1000, Server 2: from 1001 to 2000, etc…)
- **MaxCardholders**: Minimum value for the NumBadge (see explanation for MinCardholders). The value should be equal to the highest allowed NumBadge of the controller. For example, the highest NumBadge allowed for TPL with 128K RAM is 6552 (with 4 doors) or 8934 (with 2 doors). The TPL with 512k RAM can accept up to NumBadge of 32760 (with 4 doors) or 44760 (with 2 doors). If controllers have different RAM sizes, this entry should match the highest NumBadge on the lowest RAM controller. When all the available NumBadge are occupied (i.e., according to the limits as defined by MinCardholders & MaxCardholders) the Application gives the error message: "Controller Memory Full".
- **DynamicNumBadge**: if =1, each controller may have different NumBadge (cardholder unique index on the controller memory) for a same cardholder, allowing controller memory optimization. NumBadge array of each controller is based only on known cardholders according to their access group. If =0, NumBadge array is the same for all the controllers in the system. Example: in a system of 20k cardholders, one of the controllers needs to grant access just two cardholders – the ones that was last to be added to the system. If DynamicNumBadge=0, their NumBadge would be 19999 & 20000 (which means a TPL with 128K RAM cannot accept them). If

DynamicNumBadge=1, their NumBadge on this controller would be 1 & 2. Note that Global Anti Passback is not supported when DynamicNumBadge=1.

- **Timeout Log Off**: Duration (in minutes) after which the Application automatically logs off. The program continues to work in the background. If =0, there is no automatic log off (highly recommended when performing long server procedures, like cardholders import, controller initialization, etc.).
- **AutomaticInhibition**: Duration (in days) after which the Application automatically invalidates all the cards that were not used on this period. The Application checks each night between 00:45 and 00:46. If =0, there is no automatic cardholder inhibition.
- **BioSmart_SiteKeyMode**: Value corresponding to the 4 options of Bio Smart Security in the Tools>Options>SQL/BIO screen. The available values are 0 (asking the Site code once per session), 1 (asking the Site code once), 2 (asking the Site code at each Bio Smart use), 3 (disabled).
- **BioSmartWaitingCardTimeout**: Timeout (in seconds) in which the Application waits for smart card after clicking 'Read Smart Card'.
- **SendBioPending**: if =1, Bio template pending are sent during startup. If =0, skipping the 'send pending' commands of Bio template readers upon application startup.
- **DebugBIO**: if =1, all messages relating to Bio readers are written into AME files (and in DBMon).
- **Default Badge Code**: Value of default card prefix for all new cards. The prefix would be auto created as the card code for each new card, but users can freely edit it. If no value is specified, there is no default badge code prefix.
- **Default Technology**: Default technology for new cards and new readers. The available values are 1 (Magnetic card), 2 (Barcode), 3 (Wiegand), 4 (Wiegand 2), 5 (Wiegand Keypad), 6 (Bio Smart Card), 7 (Touch), 8 (Radio).
- **UseWorkstationTech**: if =1, each workstation uses the 'Default Technology' option from its INI file (useful in MultiCompany/Multi-site applications) instead of using the one of the server INI file.
- **UseUSBReader**: if =1, support Paxton USB reader for enrollment. Clicking on the 'Get from card' button and passing a card at this reader displays the card code on the 'Get from card' screen.
- **USBReaderFormat**: Card format supported by the USB reader when the entry UseUSBReader=1. The available values are 0 (hexadecimal), 1 (16 bit decimal), 3 (24 bit decimal).
- **MultipleViewPhoto**: if =1, more than one 'Display Photo' screen can be opened allowing to match several readers simultaneously. On each request to open this screen, a new instance is opened. If =0, only one instance of this screen is allowed.
- **DisplayPhotoDuring**: Minimum duration (in seconds) to show an image on the Display Photo screen, avoiding too fast photo swapping while many successive access events are received. If =0, the screen shows each image until the next access event is received.
- **PhotoSize**: Default photo size when capturing a photo through the cardholder screen. The available values are 100, 150, 200, 250, 300, 350, 400.
- **PhotoSizeType**: Additional photo sizes to the entry 'PhotoSize' for having different photo ratios (i.e. 4x3, 4x3.25). The available values are 1 (100 X 75), 2 (100 x 81), 3 (100 x 100), 4 (150 x 150), 5 (200 x 150), 6 (200 x 162), 7 (200 x 200), 8 (250 x 250). If =0, the 'PhotoSize' option is used.
- **TerminalReader**: Allow to display the transactions made using the DDS Terminal into TA or TA+ reports by associating them to a reader. If =1/2/3/4, all the DDS Terminal transactions will be considered as being passed from reader no.1/2/3/4 of the controller which the DDS Terminal is connected to. Note that in the log event screen, the transactions are still attributed to the relevant DDS Terminal. If =0, the DDS terminal transactions will have no attribution to any reader.
- **PhotoFormat**: Default photo file format in the cardholder screen. The available values are JPG, BMP.

- **LocationRefresh**: Period (in seconds) of the automatic refresh for the Location screen. If =0, there is no automatic refresh for the Location screen.
- **ConfirmOnlyNotOnAlarm**: Value corresponding to the 3 options of Alarm Confirmation in the Tools>Options>General screen. The available values are 0 (allowing to confirm all alarms), 1 (restricted to OFF inputs) and 2 (displaying warning message before confirming).
- **NightShiftHours**: Maximum allowed work time (in hours) for Roll Call supporting overnight work. If =0, overnight work is not supported by the Roll Call (the advanced T&A report which checks entry/exit readers only).
- **Distant_ConnectOnPending**: if =1, the Application automatically updates dial up controllers (via modem) when pending should be sent to these controllers.
- **StartMinimized**: if =1, the Application starts with minimized window.
- **ImportDB_LogOnlyError**: if =1, when importing cardholders, the log file (import.log by default) contains only errors. If =0, the log file contains all the actions, including successful imports. It is recommended to set this entry at 1 if frequent imports are realized to avoid having big log files.
- **ImportwoDownload**: if =1, when importing cardholders, the controllers are not updated, saving process time (recommended for large databases). It is highly advised to initialize the controllers once the import is done.
- **AMEFileMaxSize**: Maximum size (in Mbytes) of the daily error files (.ame) on the AME folder. When growing bigger the Application renames the file and open a new one, up to the value of the entry AMERotation.
- **AMERotation**: Maximum number of AME files per day. In case the Application needs to write more AME files in one day, the new file would override the last. For example, if 7 files needed to be created in a certain day, and the entry is equal to 3, the folder would finally contain the 1st, 2nd and the 7th file. Their total size would be AMEFileMaxSize X AMERotation (i.e. 5 X 3 = 15MB).
- **Light**: if =1, when no dongle is installed, the application just supports the basic modules and limited functionality on many screens. If =0, when no dongle is installed, the application supports all the modules with DEMO configuration for demonstrations.
- **EmailServerAddress**: SMTP Server Address, defined in the Tools>Options>General>E-mail options screen, for sending e-mail via an action.
- **EmailSenderAddress**: Sender E-mail Address, defined in the Tools>Options>General>E-mail options screen, for sending e-mail via an action.
- **EmailUser**: User account, defined in the Tools>Options>General>E-mail options screen.
- **EmailPassword**: E-mail Password, defined in the Tools>Options>General>E-mail options screen.

[APB]

- **SoftAPB**: For special projects only. If =1 and if special firmware on controllers, when a cardholder requests to access a second time from a same reader which has the local Anti-Passback mode, the controller grants the access and reports the event as "Access Denied - Anti-Passback".
- **GlobalAPBwoPC**: if =1, Global Anti Passback is managed by the application and also through the 2nd bus of the controllers, even when the application is down. If =0, it is managed only by the application. Modifying this entry should be followed by controllers initialization.
- **DontUpdateAPBLevel**: if =1, Global Anti Passback is not managed by the application. Usually used when the entry GlobalAPBwoPC=1.
- **UpdateEscortAPB**: if =1, when the Application manages Global Anti Passback, the Anti Passback level of the escort (i.e. the 2nd person to pass on an Escort reader), is also updated.

- **EnableStopPolling**: if =1, the 'Communication>Stop/Resume polling' menu is available. In Multi Company/Multi Site applications, only 'Super users' can see this menu.

[User]

- **LimitUserAG**: if =1, 'Access groups' tab is enable in the User screen allowing to limit each user to be able to add/remove only specific access groups. In this mode, the check box 'Also for visitor' in Access Group screen is disabled because the LimitUserAG option has higher priority. As this option only affects multiple Access Groups, it works only with the entry 'ForceMultipleAG=1'.
- **PasswordExpireAfter_Days**: Number of validation days of the user password. If =15, it means that the user password expires after 15 days. If =0, there is no expiration. Note that if the password has expired and the user is still logged, the Application will not log him off but will inform him that he should change the password because the period expired.
- **AllowReuseUserPassword**: if =0, the user can't set the same password twice.

[LPR]

- **LPRType**: if =1, support for Sony License Plate Recognition Camera model XCI-NPR. It requires the LPR module on the dongle.

[External integration]

- **OpenScreenOnTop**: if =1, when opening a screen, it stays above all the other screens for 0.5 second.
- **OpenScreenConstantOnTop**: if =1 and if the entry OpenScreenOnTop=1, when opening a screen, it stays above all the other screens constantly.
- **NoTask_ActiveAlarm**: For special projects only. If =1, when the entry Graphic+=0, no command can be realized from the Active Alarm screen. Usually used with SCADA.
- **ExternalEvents**: For special projects only. If =1, the application receives events from external applications.
- **ExternalEventsTestMin**: For special projects only. Frequency (in minutes) in which the application should check events from external applications, when the entry ExternalEvents=1.
- **Dual Confirmation**: if =1, two types of users can be defined: 'Maker', who makes access data changes that affect cardholders and 'Checker' who approves or rejects these changes. Once the changes are approved there are automatically downloaded to the respective controllers. This feature is limited to changes in the cardholders' screen.

[OPC]

- **OPC Server**: if =1, support for OPC server. It requires the OPC module on the dongle.
- **OPCServerTagUseIdOnly**: if =1, when the entry OPC Server=1, OPC tag names include the ID number of the relevant records in the database. If =0, some OPC tag names include the text inserted in the Description field of the relevant records (e.g., inputs).
- **OPCWaitingDelay**: Delay (in milliseconds) between start and end of alarm events in OPC, when the entry OPC Server=1. This is helpful when the external OPC client application might miss successive quick changes in OPC tags. The recommended value is around 100.

[ModbusTCP]

- **ModbusTCP**: if =1, support for ModbusTCP. In this mode the Application answers to ModbusTCP commands and each controller is seen as a virtual ModbusTCP device that can accept the relevant read/write supported commands. It requires the Modbus module on the dongle.
- **ModbusTCPObject**: if =1, when the entry ModbusTCP=1, ModbusTCP support is done by the external program 'TCP_MDB_OBJ.exe' (recommended). If =0, ModbusTCP support is done by the main Application execution file.
- **ModbusTCP_LogRead**: if =1, when the entry ModbusTCP_LogServer=1, the Application writes in the AME file, the events occurred on Read type data.
- **ModbusTCP_LogWrite**: if =1, ModbusTCP_LogServer=1, the Application writes in the AME file, the events occurred on Write type data.
- **ModbusTCP_LogServer**: if =1, the Application writes in the AME file, the communication operations realized via ModbusTCP.

[Telemaque]

- **Telemaque_Table**: For special projects only. Support for an integration with an advanced visitors management system by Safeware (*www.safeware.fr*).
- **Telemaque_SupprimeVisitor**: For special projects only. Support for an integration with an advanced visitors management system by Safeware (*www.safeware.fr*).

[JOURNAL]

- **doAskToJournalOnStartUp**: if =1, when the database is MS-Access type (DBType=1), the Application will prompt at startup with the question suggesting the backup when the journal contains more than 3 months data.
- **doAutoJournalEveryMonth**: if =1, when the database is MS-Access type (DBType=1), the Application checks every month, if the journal contains more than 3 months data. If it is true and if the Application is running, it launches the auto backup. The checking operation happens on the day specified at the 'dayOfMonthToAutoJournal' entry and at time specified at the hourToAutoJournal and minuteToAutoJournal entries.
- **dayOfMonthToAutoJournal**: Day of the month (eg. on 2nd day of the month) when the Application checks if the journal contains more than 3 months data and if yes, it launches the auto backup. Only when the entry 'doAutoJournalEveryMonth=1'and the database is MS-Access type (DBType=1).
- **hourToAutoJournal**: Hour of the auto backup (see the 'dayOfMonthToAutoJournal' entry).
- **minuteToAutoJournal**: Minute of the auto backup (see the 'dayOfMonthToAutoJournal' entry).

[Wizcon]

- **Wizcon Integration**: if =1, support for Wizcon Integration.
- **WizconInputTagReset**: For special projects only, when the entry Wizcon Integration=1.
- **WizconReaderTagReset**: For special projects only, when the entry Wizcon Integration=1.
- **WizconTagATimeout**: For special projects only, when the entry Wizcon Integration=1.
- **WizconAreaRefresh**: For special projects only, when the entry Wizcon Integration=1.
- **WizconGroups**: For special projects only, when the entry Wizcon Integration=1.
- **CreateTagsAtStartup**: For special projects only, when the entry Wizcon Integration=1.

- **CreateTagsAtMidnight**: For special projects only, when the entry Wizcon Integration=1.
- **ServerRedundancy**: This entry is displayed on the Application server ini file only. If =1, the Application server works as the main server. If =2, the Application server works as the backup server, when the Application server redundancy is used. In this case, when the backup server starts it sends a message via Spread to the main server to close itself. In addition, all workstations receive a command to switch from their main SQL database (defined in the entry SQL_Connect) to the alternative database (defined in the entry SQL_Connect_Backup). The same way, when the main server starts it shuts down the backup server and tells the workstations to swap to the main database.
- **ServerRedundancyName**: Name of the server that it should replace. This entry is used in Multi site application, for telling to local workstations only to swap. The backup server takes the communication linked to the main server and listen to the main server messages via spread and through the QueueMSG table. Each site could have a backup server.
- **UpdatedbyDistance**: For special projects only, for updating database of distant sites (i.e. create, modify, or delete card/cardholders).
- **UpdateDistantSites**: For special projects only, for updating database of distant sites (i.e. create, modify, or delete card/cardholders).
- **UpdateDistantSitesTimeout**: For special projects only, for updating database of distant sites (i.e. create, modify, or delete card/cardholders).
- **AllowConnectDistantSitesDB**: For special projects only, for connecting to distant databases and changes records. If =1, a new menu 'Site' appears in the Application menu with the name of the distant sites (up to 6 different sites).
- **Name_CurrentSite**: Name of the local site, when the entry AllowConnectDistantSitesDB=1.
- **Name_Site1**: Name of the 1st distant site, when the entry AllowConnectDistantSitesDB=1.
- **SQL_Connect_Site1**: Connection string to SQL database of the 1st distant site, when the entry AllowConnectDistantSitesDB=1.
- **Name_Site2**: Name of the 2nd distant site, when the entry AllowConnectDistantSitesDB=1.
- **SQL_Connect_Site2**: Connection string to SQL database of the 2nd distant site, when the entry AllowConnectDistantSitesDB=1.
- **Keico**: For special projects only, using Keico readers.

[Messages]

- **TRN0, TRN1, TRN2, TRN3**…: Values corresponding to each log events (e.g., Grant, Denied, Start/End alarm etc.), specifying whether or not it should be displayed on the event log, saved and what font color it should have when displayed. All these options are controlled in the Tools>Options>Menu screen.
- **SkinEnabled**: if =1 (default), the Application uses the Skin (or Msstyles) specified in 'SkinFile' option.
- **SkinFile**: Skin (or Msstyles) of the user interface. The skin files are located in the folder Media/Bin.
- **SkinConf**: Parameter of the Skin (or Msstyles) of the user interface.

15.3 HIDDEN OPTIONS

The Application supports the following options but they are not created by default or when clicking OK in the Tools>Options screen, unless they were previously added manually into the ini file.

(Hidden)

- **DebugCom**: for creating communication log files of the controllers' communication.
  If =1, raw HEX commands and all the polling commands including those with empty results, sent from the PC along with the controllers answers are displayed on the event log.
  If =2, this information is saved on files on the AME folder, one file per hour and per controller network. Due to the empty results, this setting means quite large files, even up to few MB per hour.
  If =4, the log files contain only the polling commands receiving new events (not the empty results).
  If =8, the log files contain only the raw HEX commands sent to the controllers.
  If =12, the log files contain the raw HEX commands and polling commands receiving new events.
  If =0, no communication log files are saved and this entry is not displayed in the ini file.
- **ExecAppOtherPC**: if =1, the Action screen displays for the action "Execute external application" the computer list allowing to select which PC will execute the application (e.g. DVR program). This entry should be set on all PC where the application is about to be executed.
- **ModbusInternal**: if =1 (not recommended), ModbusTCP support is done by the main Application execution file.
- **SpreadInterval**: 10ms by default (range 10-10000). Frequency (in milliseconds) in which the Application checks for new spread messages.
- **SpreadReConnect**: if =1, allow to reconnect to distant spread, when using the option SpreadDeamon, in case of connection failure. This function listen each 10ms by default (configurable in SpreadInterval) if new message arrives via the Spread. If the connection is failed, it returns error code that the Application catches and reconnects.
- **SpreadTimeout**: 16sec by default (range 1-60). Timeout (in seconds) in which the Application waits for an answer from another PC via the Spread.
- **UseMSMQforDownload**: Not used.
- **woReconnect** if =1, the Application will never reconnect TCP connections if one or more controllers using TCP networks do not answer.

16 RECOMMENDED TECHNICAL DOCUMENTS

No.	Doc No/ Reference	Title
	10TE001	Controller Network Definition
	02TE010	Card Format document
	10TE510	Multi-site Module
	10UE440	MODBUS IP Server
	10TE504	How to add a Workstation
	10TE507	Bandwidth Usage
	10TE509	Setup with SQL Database type
	10TE512	Connecting multiple computers to a single SPREAD deamon
	10TE523	How to create Custom Reports
	10TE524	How to run the Application as a Service
	10TE525	How to import Cardholders from a .csv-format file
	10TE540	Modem Setting
	10TE581	G+ Module
	10UE420	OPC Server
	10UE421	The SPREAD Tool
	10UE450	Sony LPR User Manual
	10UE520	Time and Attendance User Manual